

NEW ORLEANS MAIN STREET RESILIENCE PLAN



CITY OF NEW ORLEANS



Main Street Resilience Plan

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"This plan is designed to target public and private investment for long term economic and physical recovery in the event of natural or man-made adversity by identifying and focusing on the areas of greatest vulnerability."



Oretha Castle Haley Blvd.: one of New Orleans' Main Streets

1. INTRODUCTION

The Main Street Resilience Plan is designed to target public and private investment for long-term economic and physical recovery in the event of natural or man-made adversity by identifying and focusing on the areas of greatest vulnerability within Main Street commercial corridors. This chapter provides an introduction to the project, its goals and background, and develops an understanding of what Main Streets are and their locations in New Orleans. Section 2 develops an understanding of resilience, how resilience applies to Main Streets, and provides an overview of the resilience assessment methodology and results for the six corridors included for study. Chapter 3 provides more detailed assessments, analysis and recommendations for improving the resilience of each corridor. Finally, Chapter 4 identifies recommendations for improving resilience across all corridors.

Project Goals

- Develop a shared definition of resilient commercial corridors for New Orleans based on the extensive work at national and local levels (Chapter 2);
- Create a measurable and actionable methodology for assessing the resilience of commercial corridors (Chapter 2);
- Apply methodology to six corridors in the city and develop individualized recommendations for each corridor to address areas of greatest vulnerability (Chapter 3); and
- Develop how-to guides for business owners to improve the resilience of business operations and for businesses and property owners to improve building resilience (available at www.nola.gov/city-planning/).

Who is This Plan For?

The goal of this plan is to identify opportunities for each of the many diverse actors that contribute to a vibrant Main Street, including public entities like the City of New Orleans, New Orleans Redevelopment Authority (NORA), the New Orleans Regional Planning Commission (RPC), and the New Orleans Business Alliance (NOLABA), as well as business associations, non-profit organizations, and individual businesses.

Project History and Related Efforts

The project was funded by the Community Resiliency Pilot Program (CRPP) through the Louisiana Office of Community Development Disaster Recovery Unit (OCD-DRU), in conjunction with the U.S. Department of Housing and Urban Development (HUD). CRPP is centered on integrating resilience principles into all community planning efforts.

Main Street Resilience Plan

What Are “Main Streets”?

“Main Street,” as a term, is used to describe many things, from community hubs to local economies. Main Street® is also a program by the National Main Street Center, a subsidiary of the National Trust for Historic Preservation. This national network provides a framework for local organizations to revitalize commercial corridors and districts of all scales, from small towns to big cities. The State of Louisiana also maintains a coordinating program at the Office of Cultural Development that assists local communities. Several corridors in this plan have organizations with Louisiana Main Street designated programs.

Although official state and national designations exist for the Main Street® program, “Main Streets” are more generally defined as commercial corridors that serve a distinct role in cities and small towns. However, there are no readily available standards to identify a corridor as a Main Street. As a result, the project team developed the following criteria to identify existing and potential corridors as Main Streets:

- **A Main Street is a contiguous, distinct linear street that is not in a large commercial district.** A commercial district has many commercial corridors running through it that function together as a shopping and business destination. Examples of commercial districts in New Orleans are the French Quarter or Central Business District. A Main Street is separated from other surrounding streets as a commercial corridor.
- **A Main Street uses the majority of ground floor area for commercial use.** The ground floor is where most patronage and pedestrian activity occurs. Main Streets are characterized by clusters of commercial activity, as opposed to an occasional commercial use in an otherwise residential block. Main Streets may also include mixed-use buildings, with residential or office uses on the upper floors, if the ground floor is commercial.
- **A Main Street hosts diverse commercial activities.** Main Streets are characterized by a range of commercial activities that serve many needs and attract a range of users. While a restaurant row may fit other criteria, its single purpose would not be indicative of a Main Street function.
- **A Main Street has a neighborhood-serving role.** Main Streets are different than larger commercial strips, which are characterized by primarily automobile-oriented businesses. Main Streets have a smaller scale and offerings that serve the regular shopping needs of nearby residents. A corridor with only big-box retail is not consistent with the characterization of a Main Street.
- **A Main Street includes corridors with historic or emerging commercial activity.** Some commercial corridors which at one time met these criteria, but are currently experiencing high vacancy, can be considered Main Streets. As communities evolve and grow, some corridor zoning may be adjusted to allow for more commercial uses; as the market strengthens, vacancy on the corridor decreases. This criterion allows up-and-coming corridors to be included as Main Streets.

“According to the National Association of Realtors 2013 Community Preference Survey, 60% of Americans prefer to live in a neighborhood within easy walking distance of shops and businesses.”



Canal St. in downtown New Orleans is a commercial corridor, but within a large commercial district with many other commercial streets intersecting. It is not a Main Street as defined herein.

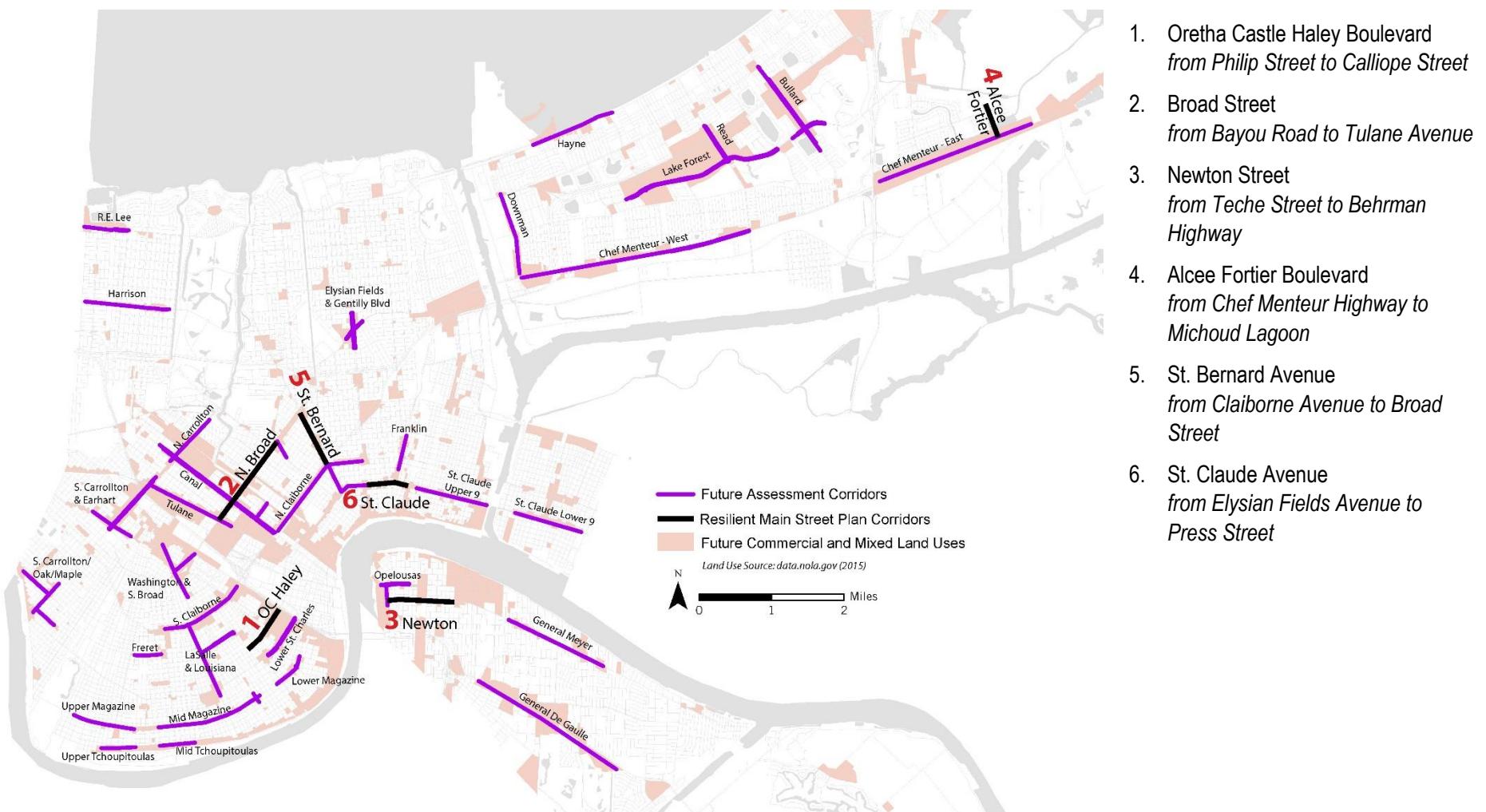


Example corridor with large big-box and automobile oriented activities. These characteristics are not associated with Main Streets.

1. Introduction

The map below shows the existing and potential Main Street corridors in New Orleans after applying the criteria to all corridors. Existing zoning, land use, and local knowledge were used to develop the results. This map is not intended to be definitive, but rather, represents a snapshot of Main Street activity as it exists today. Other parts of the city may develop into Main Street corridors in the future.

The Main Street corridors included in this study are illustrated in black on the map, and were selected by the City to represent a cross-section of the community. The corridors are:



Main Street Resilience Plan

Overview of the Planning Process

The Main Street Resilience Plan started in March 2015. The Initialization and Assessment phases included developing the assessment tools and methodology for creating a comprehensive, repeatable process for understanding and evaluating a commercial corridor's needs for resilience, detailed in Section 2. The Analysis and Recommendations phase focused on applying the assessment tools and methodology to six commercial corridors with the results detailed in Sections 3 and 4. The Final Plan phase was developing this plan, as well as the how-to guides, which are separate documents.

A Project Advisory Committee (PAC) was formed to aid the project team during all phases. The PAC included representatives from:

- City of New Orleans
 - Chief Administrative Office
 - City Planning Commission
 - Office of Homeland Security and Emergency Preparedness
 - Office of Place-Based Planning
 - Office of Neighborhood Engagement
 - Department of Public Works
 - Department of Safety & Permits
 - Chief Resilience Officer
 - Stormwater Manager
- New Orleans Sewerage & Water Board
- New Orleans Redevelopment Authority (NORA)
- New Orleans Regional Planning Commission (RPC)
- New Orleans Business Alliance (NOLABA)
- Relevant Main Street organizations:
 - Broad Community Connections
 - Mary Queen of Vietnam Community Development Corporation
 - St. Claude Main Street
 - O.C. Haley Merchants & Business Association
 - Old Algiers Main Street Corporation



Key Business Workshop Elements

The representation of the small business community and the exchange of information were essential to the success of the business workshops. The goals were:

- Expose businesses to readily available preparedness planning, specifically the IBHS OFB-EZ toolkit
- Identify local small businesses' current priorities and preferred programming for future continuity planning
- Exchange experiences and lessons learned among businesses



Participants in the Business Continuity Workshop hear from national experts and other local business on preparedness efforts.

Ready for Anything: The Business Continuity Workshops

Three free workshops were held between June 30 and July 2, 2015. The topics included preparing for disasters and helping businesses effectively recover from disruptions. Geared toward local business owners and staff from economic development and business technical assistance providers, the workshops featured national business continuity experts from the Insurance Institute for Business & Home Safety (IBHS) and were supported by local organizations. The workshops, entitled *Ready for Anything: Building Economic Resilience into your Business Model*, were designed to help business owner participants identify his or her operation's vulnerabilities during a natural or manmade disaster and review strategies to overcome these challenges. Participants also learned how to create business continuity plans and received a copy of IBHS's free, easy-to-use continuity planning toolkit, OFB-EZ®.

The feedback received from the workshops was the foundation for the development of the New Orleans Business Continuity Guide, developed as a separate standalone document during this project and available at the City's website <http://www.nola.gov/city-planning/>. The guide provides details on continuity planning of specific interest to New Orleans businesses and includes numerous case studies of local businesses putting this form of resilience into practice.

Corridor Workshops

To facilitate greater understanding of each corridor and establish community-based priorities, two rounds of workshops were held in each corridor. The feedback from these workshops is discussed in individual corridor assessments in Section 3. The details of meeting summaries, dates and location are included in the Appendix.

Round 1: Assessments

The first round of workshops was held during the Assessment phase in June 2015. The objectives of this round were:

- Provide a project overview and practical meaning of a resilient main street;
- Share initial assessment findings on the residential/commercial market, infrastructure needs, risk and other vulnerabilities; and
- Identify stakeholder concerns related to corridor challenges, vulnerabilities and stresses.

Round 2: Recommendations

The second round of workshops was held during the Analysis and Recommendation phase in August 2015 to provide feedback on preliminary recommendations. This process included a review of the key vulnerabilities and opportunities identified for each corridor and initial strategies to address them. Stakeholders and civic organizations worked to identify future action or initiatives that they could lead. This round of workshops was organized to take advantage of pre-existing meeting schedules, such as merchant association monthly meetings or public meetings for other City projects. In these cases, turnout was greatly improved by capturing existing membership networks.

Main Street Resilience Plan

Current and Previous Resilience Work

There is a growing body of work in New Orleans and other communities around the country addressing the many aspects of resilience, including planning, policy development, identifying social needs and implementing physical improvements. The work profiled here provided a foundation for the approach developed in the Assessment Methodology section and an understanding of specific activities on commercial corridors relevant to developing recommendations in Section 3.

New Orleans Plans and Initiatives

A number of plans and initiatives that improve city resilience are underway in New Orleans.

Resilient New Orleans

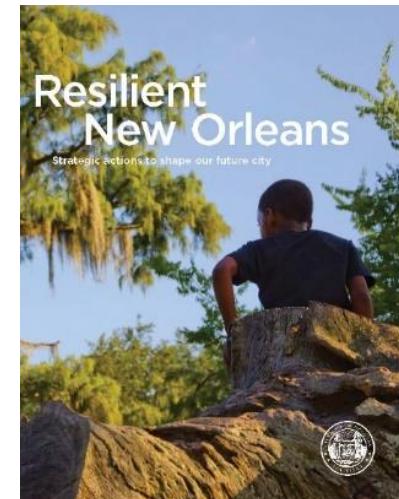
This is the city's first strategy and action plan for long term comprehensive resilience. Developed as part of the Rockefeller Foundation's 100 Resilience Cities Initiative, the plan was recently announced as the recipient of the American Planning Association's National Planning Excellence Award for a Best Practice. The plan's actions are grouped around three areas: Adapt to Thrive, Connect to Opportunity, and Transform City Systems. The actions, including establishing a resilience retrofit program for buildings and developing a small business resilience program, will impact Main Streets and other businesses.

NOLA Ready

NOLA Ready (<http://ready.nola.gov>) is a campaign of the City of New Orleans Office of Homeland Security and Emergency Preparedness (NOHSEP) to increase awareness and preparedness of residents and businesses for emergency events, particularly hurricane season. The campaign has a unique branding, appearing on billboards, print, and televised advertising. The website also contains a range of resources for residents and businesses to better prepare themselves for any range of disasters or interruptions. The NOLA Ready campaign also includes the re-entry application process in the event of a mandatory evacuation.

City of New Orleans Hazard Mitigation Plan

NOHSEP recently released a draft of the City's 2015 Hazard Mitigation Plan Update. This plan has been updated every five years since being first adopted in 2005; the plan and the update schedule are a federal requirement of the Disaster Mitigation Act. The plan's elements are 1) identifying a prioritized list of both natural and man-made hazards, 2) a vulnerability (risk) assessment and loss estimates for hazards, 3) a capability assessment of all City departments related to hazard mitigation planning and 4) a mitigation strategy to reduce potential losses. Mitigation actions related to continued participation in FEMA's Community Rating System (CRS) include improving water retention systems





Reimagined street design concept to improve water storage capacity and transportation from the City's NDRC application. Source: City of New Orleans



Streetscape design for O.C. Haley Boulevard estimated to begin construction in 2016. Source: City of New Orleans



NORA Façade ReNew funded improvements underway on Bayou Road. Photo credit: The New Orleans Advocate

along streets to reduce subsidence and flooding, and developing a program to promote the purchasing of flood insurance. The detailed, prioritized mitigation strategy actions are currently under development.

National Disaster Resilience Competition (NDRC)

In 2014, HUD announced the National Disaster Resilience Competition, a grant opportunity for communities affected by disasters between 2011 and 2013. The City of New Orleans was a direct applicant to the NDRC. HUD announced in January that the City was one of thirteen winning applications and would be awarded \$140 million in CDBG-NDR funding. The New Orleans application proposed an extensive redesign of water storage and drainage for much of the Gentilly neighborhood, based on the concepts within the Greater New Orleans Urban Water Plan, and also builds on the action items in Resilient New Orleans.

Implementation of the City's NDR projects is expected to begin this year.

Corridor Improvements

Several initiatives are underway to improve the buildings and streets of several commercial corridors in the city. There is already some coordination between these types of improvement programs to overlay on a single corridor for maximum benefit.

Streetscapes

The Department of Public Works (DPW), through disaster recovery grant funding, is making several corridor streetscape improvements. These include:

- Oretha Castle Haley Boulevard – designed
- Broad Streetscape – partially completed, feasibility study for additional improvements completed
- Newton Streetscape – construction completed

The City has recently reached a settlement agreement with FEMA for remaining subsurface and road work that will result in \$1.2 billion for street repairs. Many of these will likely be neighborhood streets, with the intent to prioritize based on road condition.

NORA Façade ReNew

The New Orleans Redevelopment Authority (NORA) currently has a façade improvement grant program targeted for three commercial corridors in the City: Bayou Road, Oretha Castle Haley Boulevard, and St. Claude Avenue. This reimbursable program is resulting in a number of building improvements. In practice, many building owners have used the grants for much larger renovation projects than simply for façade improvements.

Main Street Resilience Plan

Technical Assistance to Small Businesses

A number of existing local and national non-profits provide technical assistance to small businesses. Some of this work is already starting to include resilience elements, particularly business continuity planning.

- Urban League of Greater New Orleans – in addition to providing support for businesses, the Urban League has produced a resource for continuity planning titled *Small Business Guide to Disaster & Recovery*.
- Good Work Network – provides resources and technical assistance to minority- and women-owned businesses, focusing on skill development. Good Work Network recently completed the Roux Carré food hall on O.C. Haley Boulevard to promote food service entrepreneurs and artists.
- StayLocal! – an initiative of the Urban Conservancy, StayLocal! has been promoting New Orleans small businesses with marketing campaigns and organizing efforts.

Other Related Planning Efforts

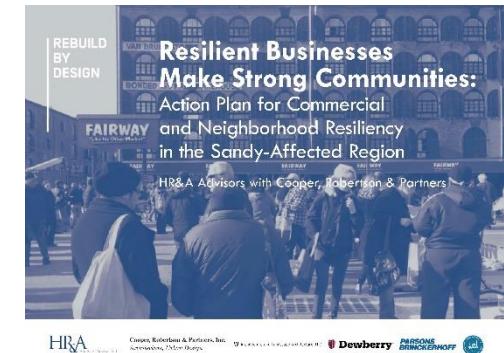
The plans profiled here describe how commercial corridors are affected by stressors and shocks, how to quantitatively measure economic and disaster resilience, and how to incorporate these elements in a Gulf South community.

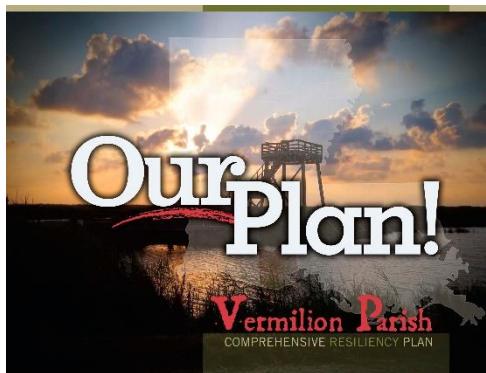
“Resilient Businesses Make Strong Communities: Action Plan for Commercial and Neighborhood Resiliency in the Sandy-Affected region”

Rebuild by Design (2014)

This project evaluated behavioral and physical initiatives to make certain Sandy-affected communities, and specific commercial corridors within them, more resilient. The communities were Red Hook, Brooklyn, NY, Beach 106th St., Rockaway, NY and Asbury Park, NJ. The team sought to use innovative design concepts and a participatory community process to create recommendations that enhance resilience and economic vitality. Highlights include:

- Used complete process of establishing baseline, engaging neighborhood, developing designs and recommending implementation strategies
- Polled residents, businesses and government groups to better understand communities and perceived weaknesses (both behavioral and physical) that existed in each community
- Made common and community specific recommendations, focusing on infrastructure to address physical weaknesses
- Remained sensitive to cost of capital improvements, and source of financing
- Used primarily qualitative measurements of resilience
- Focused on resilience in the face of environmental shocks; no study on the effects of constant stressors and economic shocks



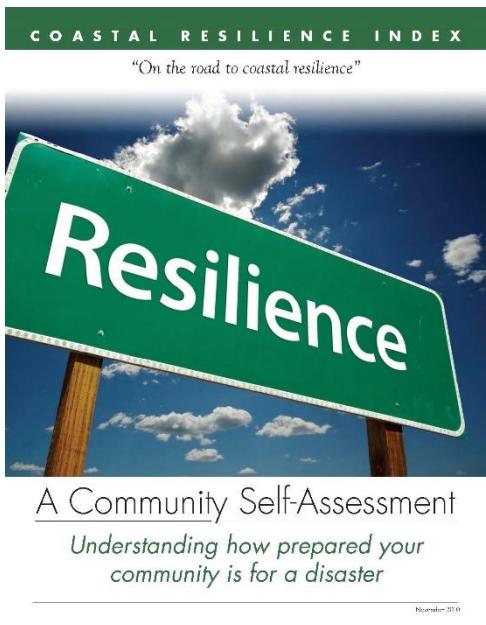


"Vermilion Resiliency Plan"

Vermilion Parish

This study takes a holistic approach to conceiving resiliency, developing a roadmap to reach resiliency, then outlining the steps that should be taken to achieve resiliency. Looking at nine different elements of resilience in Vermilion Parish, LA, from coastal restoration and flood protection to economic development to historic and cultural preservation, the plan is a comprehensive community-based approach. The plan seeks to mitigate risk, better understand resiliency, raise awareness surrounding problems, educate the public and seek funding for projects.

The plan specifically outlines how cultural preservation and economic development are critical to a community's overall resilience. While it does not specifically look at commercial corridors, it does include estimated costs and suggests funding sources for all aspects of increasing resilience. Another strength of this plan is its focus on rural, unincorporated areas of the parish, where access to services is more limited.



"Coastal Resilience Index: A Community Self-Assessment"

Mississippi-Alabama Sea Grant Consortium

This tool was developed by the Mississippi-Alabama Sea Grant Consortium to allow community leaders to easily identify weaknesses in their disaster preparedness and resilience efforts. The tool uses information that is readily available and should be part of a larger overall plan to make a community more resilient in advance of an environmental hazard.

The tool identifies aspects of resilience that are specific to the Gulf Coast, and also outlines community and municipal services that are important for resilience and recovery. The tool also creates a scale for assessing and measuring resilience; however, this scale is not comparable to other cities. The scale measures resilience to the effects of hazards and disasters, but does not incorporate economic, social, or political stressors and shocks.

Main Street Resilience Plan

“Disaster Resilience Indicators for Benchmarking Baseline Conditions”

Susan L. Cutter, Christopher G. Burton, Christopher T. Emrich

In an effort to standardize the metrics for identifying and measuring disaster resilience within communities, this study establishes baseline conditions and provides a methodology and set of indicators for measuring against the baseline conditions. The study's outline of baseline characteristics for communities that foster resilience provides a set of standard indicators for measuring resiliency.

This study also looks at a wide array of individual drivers in disaster resiliency including social, economic, institutional, infrastructure and community capacities. It examines the southeastern region of the U.S. generally, but is not specific to Louisiana. While it only looks at natural disasters and hazards, the study does use data-driven indicators and applies them to a scale upon which community resilience can be measured and compared to other communities.

“Downtown resilience: A review of recent (re)developments in Tempe, Arizona”

Carlos J.L. Balsas

Specifically studying the relationship between economic cycles and resilience theory, this paper analyzes the connection between urban revitalization efforts in Tempe, Arizona and the economic resiliency (or lack thereof) that resulted. The study focuses on commercial resilience in the face of economic cycles in an urban environment, examining how streetscape projects and transportation initiatives can fail at increasing economic resilience if they are not nurtured through city-wide urban design practices and community-oriented planning decisions.

Tempe, AZ is an urban environment that is starkly different than New Orleans, due to the city's desert climate and inland location; however, the study does not examine resiliency in the face of environmental hazards, so its findings are more broadly applicable to New Orleans.

Summary

These efforts demonstrate a number of excellent initiatives, providing guidance and inspiration for actions to improve the economic and physical resilience of commercial corridors. However, there was no measurable and repeatable process for assessing a corridor's resilience. The rest of this section focuses on the creation of this process.



“Resilience is not a checklist to be completed; rather, it is a process of continuously evaluating and assessing a range of threats to a community and addressing the areas of greatest vulnerability.”

2. ASSESSING RESILIENCE

This section develops the basis and methodology for assessing Main Street resilience.

Understanding Resilience

Resilience has become a local and national issue as more communities work to prepare for and recover from natural disasters. The concept of resilience has also evolved to include the ability to address long-standing issues of economic decline and inequity. Building off the previous work of cities, federal government agencies, and philanthropy, a common understanding of resilience has emerged. As defined in Resilient New Orleans, the City's strategy and action plan, “**city resilience is the capacity of individuals, communities, institution, businesses and systems within a city to survive, adapt, and grow no matter what kinds of chronic stress and acute shocks they experience.**” Resilience is not a checklist to be completed; rather, it is a process of continuously evaluating and assessing a range of threats to a community and addressing the areas of greatest vulnerability.

Main Street Resilience Framework

The process of evaluating the resilience of Main Streets began by identifying overall framework questions. Just as a city's resilience is a continuous process, Main Street resilience requires continuously assessing and addressing the biggest vulnerabilities to sustained, inclusive and long-term prosperity. Main Streets are represented by the stewards of their many components: businesses, patrons, buildings and infrastructure. The following framework questions provide a practical guide to recognizing the many components of a commercial corridor's resilience:

1. How vulnerable are corridor businesses, buildings and infrastructure to shock events?
2. Does the corridor facilitate economic prosperity that can withstand and overcome times of stress?
3. Do corridor businesses have access, availability, and the capacity to engage resources needed to weather shocks & stresses?
4. Are adequate social networks in place to support corridor businesses during shocks and stresses?

The next section identifies the shocks and stresses relevant to commercial corridors and details the indicators developed to quantitatively answer these framing questions.

Assessment Methodology

Defining Shocks and Stresses

Building on the work of a number of sources, including the Resilient New Orleans Preliminary Assessment and the New Orleans 2010 Hazard Mitigation Plan, the project team identified a comprehensive set of shocks and stresses to begin the process of developing a robust assessment specific to commercial corridors.

Since the focus of this plan is Main Streets, the project team evaluated the relevance of each threat at the corridor scale before moving on to the process of measuring corridor resilience.

Shocks

Shock events are typically short in duration and high in intensity. Experience has shown shock events can be much worse when communities and businesses are already enduring stresses.

- Flood (10+ Year Event)
- Hurricane
- Storm Surge
- High Winds
- Dam/Levee Failure
- Tornadoes
- Lightning
- Hail
- Winter Storms
- Thunderstorms
- Hazardous Spills
- Economic Event or Market Crash
- Extreme Heat or Cold
- Utility Outage (Power, Water)
- Supply Chain Disruption
- Road Closure
- Social Unrest

Stresses

Stresses are typically longer in duration or effect, and often of a lower and sustained intensity. These stresses are grouped into physical and social categories.

PHYSICAL STRESS

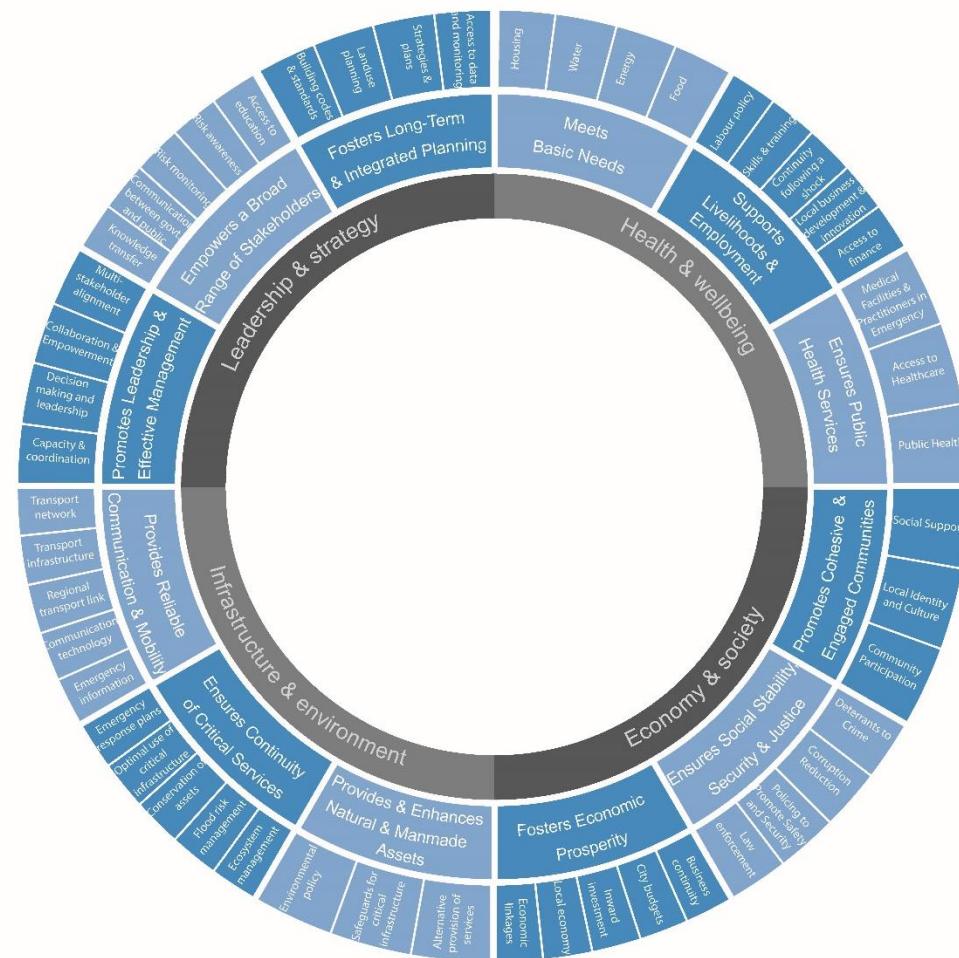
- Land Subsidence
- Street Flooding
- Coastal Erosion
- Drought
- Contamination, Air Quality
- Aging Water/Sewerage/Drainage Infrastructure
- Aging Building Stock
- Poor Design of Built Environment

SOCIAL STRESS

- Dramatic Changes in Real Estate Prices
- Access to Capital (Redlining)
- Endemic Violence, Incarceration
- Inefficient Public Transportation
- Food Access
- Poor Education, Workforce Training
- Concentrated Poverty
- Limited Social Mobility
- Concentration of Public Health Issues
- Access to Public Health Services
- Homelessness

Developing Assessment Indicators

The basis for developing the assessment indicators was the City Resilience Framework, developed as a part of the Rockefeller Foundation's 100 Resilient Cities initiative. The project team evaluated the relevance or applicability to a corridor scale and built out measurable indicators for as many drivers and sub-drivers as possible. Data sources were identified for each element and further refined as data collection proceeded.



The City Resilience Framework has four categories and 12 indicators for evaluation of a city's ability to withstand shocks and stresses. This framework was translated into indicators relevant to a Main Street corridor and matched with data sources.

For example, the initial research questions identified for Health & Wellbeing: Meets Basic Needs: Food Security were:

- 1) Is there easy access to affordable fresh food and groceries on or within the corridor?
- 2) Is there an adjacent residential area that lacks access to affordable fresh food?

The associated indicators are:

- 1) Does the corridor have a full service grocery store?
- 2) Can corridor occupants purchase affordable fresh foods on the corridor?

In this example, the data sources identified for the first research question and corresponding indicator are the City of New Orleans and ESRI Business Analyst. For the second question and indicator, a survey question was used, as affordability is relative.

The project team developed an initial set of 96 indicators. Indicators requiring original data collection became the basis for three surveys, addressing different aspects of a corridor: buildings, business owners or managers, and elevation. More information about the surveys is provided in the next section.

Main Street Resilience Plan

Data indicators were then reorganized to fit within the Main Street Resilience framework questions listed on page 11. This comprehensive list was further condensed as data sources were unavailable, too difficult to collect, or not measurable. A complete list of all indicators, including those quantified and those identified for future work, is provided in the Appendix.

How vulnerable are corridor facilities and users to shock events?

| Category | Indicator | Description | Source |
|---------------------|---|--|---|
| Basic Needs | Health Care On Corridor | Healthcare businesses including hospitals and clinics within 1/10 mile of the corridor. | InfoUSA, 2015 & City of New Orleans, 2015 |
| | Pharmacies on Corridor | Pharmacies within 1/10 mile of the corridor. | City of New Orleans, 2015 |
| | Density of health-related code violations | Describes health-related code violations per acre within 1/4 mile of the corridor, between March 2013 and May 2015 | City of New Orleans |
| Flooding & Drainage | Max Predicted flood depth (ft) | Average maximum predicted flood depth using the City of New Orleans Department of Public Works (DPW) hydraulic model in feet above the manhole rim | City of New Orleans, 2015 |
| | Average drainage node elevation (ft) | DPW hydraulic model drainage nodes | City of New Orleans, 2015 |
| | Known drainage infrastructure deficiencies | Describes deficiencies visible at street level on each corridor | Infrastructure Field Survey, 2015 |
| | NFIP claims per acre of 0.25 mi. buffer | National Flood Insurance Program (NFIP) flood claims per acre within 1/4 mile of each corridor between May 1978 and June 2013 | City of New Orleans |
| | Catch basins in less than average condition | Percentage of catch basins along corridor that are in below average or worse condition | Infrastructure Field Survey, 2015 |
| Preparedness | Business Emergency Preparedness Plan | Percentage of business with written plans for evacuation | Business Survey, 2015 |
| | Business Communication Plans | Percentage of businesses with written plans for communicating with employees | Business Survey, 2015 |
| | Business Continuity Plans | Percentage of businesses with written business interruption plans | Business Survey, 2015 |
| | Employee training on emergency plans | Percentage of businesses that provided training for employees in the event of an emergency | Business Survey, 2015 |
| | Businesses with backup power systems | Percentage of business reporting a generator or similar back-up power system | Business Survey, 2015 |
| Structures | Foundation on grade | Percentage of buildings on corridor with ground floor at-grade | Building Survey, 2015 |
| | Unprotected windows or doors | Percentage of buildings on corridor with windows or doors without installed storm protection | Building Survey, 2015 |
| | In 'below average' or worse condition | Assessment of building structure conditions | Building Survey, 2015 |
| | Connected Downspouts (lower is better) | Buildings with connected downspouts, lower score is better | Building Survey, 2015 |
| | HVAC not elevated | HVAC equipment, such as condensers, at ground level | Building Survey, 2015 |

2. Assessing Resilience

Does the corridor facilitate economic prosperity that can withstand times of stress?

| Category | Indicator | Description | Source |
|-------------------|---|---|--|
| Active Living | Park on Corridor | Presence of a park or playground on the corridor | City of New Orleans, 2015 |
| | Bike/Ped Facility On Corridor | Describes proximity to existing and planned bicycle facilities | Regional Planning Commission |
| | Avg. Bike Crash / Mile | Bicycle crashes per mile on each corridor between 2008 and 2012. | Regional Planning Commission |
| | Avg. Ped Crash / Mile | Crashes involving pedestrians per mile on each corridor between 2008 and 2012 | Regional Planning Commission |
| Basic Needs | Groceries On Corridor | Food stores (convenience and full services) within 1/10 mile of each corridor | City of New Orleans |
| Crime | All Calls, % Change, 2012-2014 | All 911 calls resulting in NOPD dispatch between 2012 and 2014 | City of New Orleans |
| | Violent, % Change, 2012-2014 | 911 calls for violent crimes resulting in NOPD dispatch between 2012 and 2014 | City of New Orleans |
| | Property, % Change 2012-2014 | 911 calls for property crimes resulting in NOPD dispatch between 2012 and 2014 | City of New Orleans |
| | Perception of crime (same or better) | Perception of crime rate staying the same or improving by corridor businesses | Business Survey, 2015 |
| Market Conditions | % Population Change, 2010-2015 (1/4 mi.) | Comparison of 2010 and 2015 population within 1/4 mile of each corridor | US Census, 2010; ESRI, 2015 |
| | Residential Price per sqft, 2014 (1/4 mi) | Home sale price per square foot within 1/4 mile of each corridor | Multiple Listing Service, 2015 |
| | Change in Residential Price per sqft, 2009-2014 | Comparison of 2009 home sale price per square foot to 2014 home sale price per square foot within 1/4 mile of each corridor | Multiple Listing Service, 2015 |
| | Rent / HH Income | Comparison of 2013 median income and 2013 median contract rent within 1/4 mile of each corridor | US Census American Community Survey, 2009-2013 |
| | Median Income | Median 2013 household income within 1/4 mile of each corridor | US Census American Community Survey, 2009-2013 |
| | % Change Commercial Assessment (2011-15) | Change in commercial property assessment value from 2011 to 2015 within 1/10 mile of corridor | City of New Orleans, 2015 |
| | Retail Leakage per Sales (0.5 Mi) | Ratio of dollars spent by residents living within 1/2 mile of corridor that leave the area to sales generated within 1/2 mile | ESRI Business Analyst, 2015 |
| Structures | Local Retail Sales Potential (Millions) | Dollars spent by residents within 1/2 mile that are spent outside the area | ESRI Business Analyst, 2015 |
| | Vacant /Appears Unoccupied | Describes structures on the corridor that, upon exterior inspection, appeared to be unoccupied. | Building Survey, 2015 |
| | On Site Parking | Lots on the corridor that include on-site parking. | Building Survey, 2015 |
| | Building Use - Commercial | Percent of buildings that are commercial use | Building Survey, 2015 |
| | Building Use - Institutional | Percent of buildings that are institutional, such as churches or schools | Building Survey, 2015 |
| | Building Use - Mixed Use | Percent of buildings with a mix of uses, such as commercial and residential | Building Survey, 2015 |
| | Building Use - Residential | Percent of buildings that are residential use | Building Survey, 2015 |

Main Street Resilience Plan

Do corridor businesses have access, availability, and the capacity to engage resources needed to weather shocks & stresses?

| Category | Indicator | Description | Source |
|-------------------|---------------------------------|--|-----------------------|
| Business Needs | Business interruption insurance | Rate of businesses with business interruption insurance, as reported by businesses | Business Survey, 2015 |
| | Flood Insurance | Rate of businesses with flood insurance, as reported by businesses | Business Survey, 2015 |

This category was ultimately limited in the availability of sources for meaningful assessment. Business owners and managers generally were reluctant to discuss sensitive financial information. As a result, this framing question was unassessed in the detailed corridor profiles in Chapter 3.

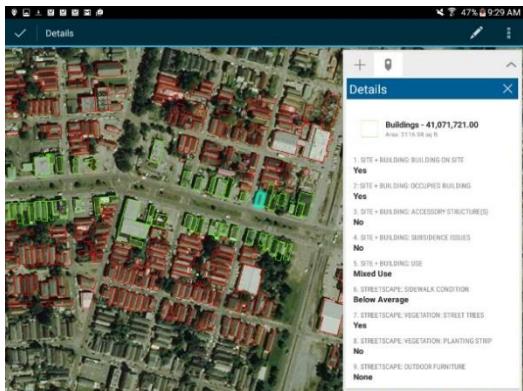
Are adequate social networks in place to support corridor businesses during shocks and stresses?

| Category | Indicator | Description | Source |
|-----------------|--|---|-----------------------|
| Civic Groups | Business Association | Presence of a business association | City of New Orleans |
| | Association Participation Rate | Approximate rate of participation of corridor businesses in an association (self-reported) | Interviews |
| | Business awareness rate | Awareness of businesses of corridor associations, as reported by businesses. | Business Survey, 2015 |
| | Community groups/Neighborhood Associations | Number of organizations registered with the City of New Orleans overlapping with the corridor | City of New Orleans |

As demonstrated in these tables, a number of indicators required original data collection, described further in the next section.



Surveyors assessing building and site conditions.



A screenshot of the tablets used to conduct both surveys.

Data Collection

Many of the data sources identified are available from national and local government sources. To measure a number of metrics, three original surveys were conducted. Individual corridor results and resulting recommendations are presented in Section 3: Corridor Specific Plans.

Building Survey

All buildings in the six corridor study areas were surveyed to document existing conditions. The project team used the data collected to evaluate potential risks as well as areas for improvements to buildings, sites, and streetscapes. The team surveyed properties from the street and stood in front of each structure, walking around where possible, and used tablets with web-based GIS to quickly and accurately answer 41 questions per property. Surveyors did not enter buildings to evaluate the interior. Details are provided in the Appendix.

Business Survey

The business survey was critical to gathering information for the assessment process. Survey results provided information that was not readily available from traditional data sources. Details on questions and results not identified in the next section are provided in the Appendix.

Survey overview:

- 59 completed surveys
- 271 businesses identified
- Approximately 20-25 questions
- Door-to-door and online
- 65 percent lease space
- Mostly small businesses
(83 percent have fewer than 10 employees)
- Based on Business Occupancy License database

Infrastructure Field Survey

The team completed an assessment of infrastructure for each corridor, focusing on stormwater catch basin conditions and elevation measurements. Elevations were measured three times along each corridor, at two points: the bottom of the curb where it meets the street and the highest point of the sidewalk.

Main Street Resilience Plan

Overview of Assessment Results

The following tables present selected results from the assessment for each corridor. Full results of all indicators are included in the Appendix. Results are compared to either the New Orleans citywide average, or, where available, the average across all six corridors (indicated in blue in these tables). Each indicator is highlighted on a color scale for a relative condition from red—representing an area of concern, to green—an area of strength. Each corridor's vulnerabilities are unique. These results are discussed in greater detail, along with community input from workshops, in the next chapter.

| | | Alcee Fortier | Broad | Newton | Oretha Castle Haley | St. Bernard | St. Claude | New Orleans Corridor Average |
|---|---|---------------|----------|---------|---------------------|-------------|------------|------------------------------|
| How vulnerable are corridor facilities and users to shock events? | | | | | | | | |
| Basic Needs | Health Care On Corridor | Limited | Multiple | Minimal | Minimal | Limited | Yes | |
| | Pharmacies on Corridor | Multiple | Multiple | None | Nearby | Yes | Yes | |
| | Density of health-related code violations | n/a | 0.74 | 1.13 | 0.95 | n/a | n/a | |
| | Max Predicted flood depth (ft) | 0.0 | 0.7 | 1.4 | 1.0 | 1.9 | 1.8 | |
| | Average drainage node elevation (ft) | -3.6 | -0.3 | 1.7 | 1.9 | 0.1 | 2.0 | |
| Flooding & Drainage | Known drainage infrastructure deficiencies | n/a | 1 cb | 1 cb | 7 cb | 11 cb | many | |
| | Catch basins in less than average condition | 42% | 20% | 54% | 27% | 46% | 25% | 36% |
| | NFIP claims per acre of 0.25 mi. buffer | 0.56 | 3.67 | 0.50 | 1.06 | 3.54 | 2.39 | |
| | Business Emergency Preparedness Plan | n/a | 15% | n/a | 53% | 0% | 40% | 37% |
| | Business Communication Plans | n/a | 28% | n/a | 73% | 67% | 87% | 63% |
| Preparedness | Business Continuity Plans | n/a | 16% | n/a | 36% | 0% | 36% | 29% |
| | Employee training on emergency plans | n/a | 29% | n/a | 38% | 50% | 69% | 50% |
| | Businesses with backup power systems | n/a | 37% | n/a | 23% | 33% | 54% | 35% |
| | Foundation on grade | 81% | 77% | 71% | 28% | 52% | 69% | 63% |
| | Unprotected windows or doors | 46% | 51% | 69% | 67% | 63% | 53% | 58% |
| Structures | In 'below average' or worse condition | 5% | 24% | 23% | 20% | 26% | 23% | 20% |
| | Connected Downspouts (lower is better) | 0% | 10% | 3% | 19% | 3% | 8% | 7% |
| | HVAC not elevated | 50% | 52% | 58% | 58% | 60% | 62% | 57% |

Notes: 'cb' = catch basin; "n/a" indicates insufficient data to report

2. Assessing Resilience

| | | Alcee Fortier | Broad | Newton | Oretha Castle Haley | St. Bernard | St. Claude | New Orleans Corridor Average |
|---|---|---------------|----------|----------|---------------------|-------------|------------|------------------------------|
| Does the corridor facilitate economic prosperity that can withstand times of stress? | | | | | | | | |
| Active Living | Park on Corridor | No | Yes | No | Nearby | No | No | |
| | Bike/Ped Facility On Corridor | No | Partial | Shared | Planned | Lane | Lane | |
| | Sidewalk assessment | Good | Narrow | Good | Fair | Poor | Good | |
| | Avg. Bike Crash / Mile | 0.0 | 6.9 | 1.1 | 2.4 | 2.5 | 4.3 | 2.9 |
| | Avg. Ped Crash / Mile | 2.9 | 6.7 | 1.9 | 6.6 | 4.0 | 3.4 | 4.3 |
| Basic Needs | Groceries On Corridor | Limited | 2 | Limited | Limited | Limited | 1 | |
| | All Calls, % Change, 2012-2014 | -28% | -6% | -35% | -16% | -12% | -43% | -11% |
| Crime | Violent, % Change, 2012-2014 | -55% | -5% | 8% | 26% | 9% | 1% | 9% |
| | Property, % Change 2012-2014 | -20% | 1% | -16% | 15% | 11% | 21% | 4% |
| | Perception of crime (same or better) | n/a | 76% | n/a | 67% | n/a | 100% | 80% |
| | % Population Change, 2010-2015 (1/4 mi.) | 22% | 9% | 3% | 10% | 11% | 5% | 9.8% |
| Market Conditions | Residential Price per sqft, 2014 (1/4 mi) | n/a | \$163 | \$89 | \$242 | \$98 | \$264 | \$171 |
| | Change in Residential Price per sqft, 2009-2014 | n/a | 44% | 11% | 22% | 40% | 54% | 34% |
| | Rent / HH Income | 28% | 35% | 32% | 34% | 34% | 28% | 25% |
| | Median Income | \$22,596 | \$24,186 | \$27,992 | \$22,444 | \$22,399 | \$36,162 | \$37,146 |
| | % Change Commercial Assm't (2011-15) | 36% | 37% | 11% | 37% | 37% | 31% | 34% |
| | Retail Leakage per Sales (0.5 Mi) | n/a | 0.64 | 0.7 | 0.35 | 0.66 | 0.55 | 0.58 |
| | Local Retail Sales Potential (Millions) | n/a | \$15.5 | \$9.2 | \$8.9 | \$11.3 | \$11.8 | \$11.3 |
| Structures | Vacant /Appears Unoccupied | 14.0% | 18.0% | 31.0% | 30.0% | 22.0% | 22.0% | 23% |
| | On Site Parking | 100.0% | 52.7% | 29.7% | 41.9% | 34.2% | 29.9% | 48% |
| | Building Use - Commercial | 57.9% | 58.2% | 31.1% | 24.2% | 30.1% | 42.5% | 41% |
| | Building Use - Institutional | 0.0% | 5.5% | 8.1% | 12.9% | 5.5% | 2.3% | 6% |
| | Building Use - Mixed Use | 36.8% | 11.0% | 2.7% | 19.4% | 4.1% | 23.0% | 16% |
| | Building Use - Residential | 0.0% | 22.6% | 50.0% | 33.9% | 54.8% | 31.0% | 32% |

Notes: Indicators shown in gray are measures of building use, rather than reflective of a corridor's vulnerability (scaled red/green for other indicators); "n/a" indicates insufficient data to report

Main Street Resilience Plan



Do corridor businesses have access to, and the capacity to engage, resources needed to recover from shocks & stresses?

| | | | | | | | | |
|----------------|---------------------------------|-----|-----|-----|-----|------|-----|-----|
| Business Needs | Business interruption insurance | n/a | 53% | 0% | 33% | 50% | 36% | 41% |
| | Flood Insurance | n/a | 76% | 33% | 54% | 100% | 86% | 71% |

Are adequate social networks in place to support corridor businesses during shocks and stresses?

| | | | | | | | | |
|--------------|--|-----|--------|-----|------|-----|-----|--|
| Civic Groups | Business Association | n/a | 1 | 1 | 1 | 0 | 2 | |
| | Association Participation Rate | n/a | Medium | Low | High | n/a | Low | |
| | Business awareness rate | n/a | 10% | n/a | n/a | n/a | 21% | |
| | Community groups/Neighborhood Associations | n/a | 3 | 2 | 2 | 2 | 2 | |

Notes: "n/a" indicates insufficient data to report; data for Business Survey questions with limited response rates are not included

3. CORRIDOR SPECIFIC PLANS



Main Street Resilience Plan

Oretha Castle Haley Boulevard

.71 Mile
22 Block Faces
91 Businesses
4,570 Residents (1/4 Mile)



Description

Oretha Castle Haley Boulevard, often referred to as O.C. Haley Boulevard, is located in Central City, serving as a link between the Central Business District and neighborhoods further upriver. Once a thriving commercial corridor, its history also includes some of the most important events of the early Civil Rights movement in New Orleans. The historic building stock present today is reflective of a once-booming commercial hub and includes many two- to six-story structures.

The late twentieth century was marked by prolonged periods of disinvestment and decline. Long-term economic and social stresses played a critical role in the decline of O.C. Haley Boulevard. As a result, there are a large number of vacant lots on and adjacent to the corridor. Though physical damage from storms and other shock events has been historically minor, Hurricane Katrina intensified social and economic impacts, including population shifts resulting from damage to nearby neighborhoods.

In recent years, development has rekindled the corridor's economy and attracted significant investment. Contrasting stresses are affecting the corridor today, as the surrounding areas grapple with both the negative and positive impacts of the corridor's accelerating revitalization.



Current Land Uses on O.C. Haley Blvd.; Source: Building Survey, 2015

Assessment

Key Findings

- Priority Vulnerabilities:
 - Individual buildings and sites may be vulnerable to shocks, and may contribute to economic stresses
 - A lack of essential services serving the corridor may increase vulnerability to both shocks and stresses
- Strengths:
 - The physical infrastructure of the corridor is generally well suited to handle shock events, especially flooding
 - Strong social networks and corridor champions contribute to resiliency
 - Opportunities for further development may strengthen economic vitality



Re-investment is underway, yet remaining vacant buildings on the corridor are in need of substantial renovation.

How vulnerable are corridor facilities and users to shock events?

Infrastructure is generally well-suited to handle shock events, but requires maintenance. The physical infrastructure of O.C. Haley Boulevard is mostly resilient to flooding and other shock events. On most of the corridor, computer models predict that a storm severe enough to occur only once every ten years would cause flooding of just over six inches. The sole exception is the area near Josephine Street, which is predicted to experience up to one foot of flooding during a similar event. These flood depths are below the observed sidewalk elevation of the corridor, indicating that flood damage during 10-year storm (one with a 10% chance of occurring in any given year) may be minimal. However, potential flooding may be exacerbated by damaged or otherwise malfunctioning drainage systems. Seven catch basins were found to be clogged, and two manhole covers were damaged or missing. While the infrastructure appears fairly resilient to shocks, the potential problems caused by damage may warrant an increased inspection, maintenance, and problem-tracking program for drainage systems. Such programs are especially important in light of the possibility that there may be further problems with the drainage system that could not be identified by the visual, street-level survey.

Building construction and condition may increase vulnerability. The individual buildings and sites on the corridor may be less resilient to shock events than the core infrastructure. A significant portion of buildings on the corridor—twenty percent—appeared to be in below average or worse condition, indicating a lack of maintenance or structural integrity that make them vulnerable to a variety of hazards. Two-thirds of the structures also did not have any protection on doors and windows, and 58 percent did not have elevated mechanical, electrical or plumbing systems. Significantly, 62.9 percent of structures have 40 percent or more of their ground-level façades comprised of openings. Taken together, these building characteristics indicate a high need for building hardening. A fairly high proportion of structures (19.4 percent) on O.C. Haley Boulevard have downspouts that directly connect to the storm water drainage system. While this arrangement may serve to remove water from buildings and their immediate vicinity, it may lead to overloading of the drainage system, increasing the risk of flooding. Where downspouts are not directly connected to the drainage system, stormwater has the opportunity to be absorbed by the ground or be more slowly introduced into drains. Directly-connected downspouts introduce more water into the drainage system than unconnected downspouts, and do so at a more rapid rate, creating the potential to overload the system. More sustainable methods for handling building run-off may be possible, including bioswales and retention facilities.

Despite these vulnerabilities, some structures have resilient characteristics. A relatively large portion of structures are elevated above grade (72 percent), an especially promising figure given the low flood risk indicated by the flood model and Preliminary Flood Insurance Rate Map (FIRM). Few properties showed any problems with subsidence, another indication of overall structural integrity and resilience.

Main Street Resilience Plan



Elevation of curb bottom, sidewalk, and required 3' building height, on O.C. Haley Blvd. as well as zoning height limitations
Source: Elevation survey, conducted by MSMM, 2015; City Comprehensive Zoning Ordinance, 2015

Access to basic services is limited. The availability of basic services such as groceries, pharmacies and health clinics is a contributor to economic resilience, as identified in the resilience assessment indicators in the previous section. While the presence of these basic services might not directly affect the corridor's ability to withstand a shock, it could impact the rate at which the corridor would recover. The absence of such critical services may make it more difficult for nearby residents to resume normal, day-to-day activities, slowing residential recovery and therefore limiting the return of customers to businesses. Situated near several other major commercial corridors and centers, the O.C. Haley Boulevard corridor is near many establishments providing basic services, but provides few on its own. Of the 91 establishments within one-tenth (1/10) of a mile of the corridor, just five are food stores or health services. Most food stores serve as limited, convenience-based establishments, though the recently opened Dryades Public Market may begin to meet the demand for a full-service grocery. Health services are similarly limited, with no general practice or urgent care clinics in the immediate vicinity. While basic services are available in nearby neighborhoods, their relative scarcity on O.C. Haley Boulevard itself means the corridor's overall resilience depends on adjacent areas to withstand and recover from a shock event.



The recently renovated Myrtle Banks School building has offices on the upper floors and the Dryades Public Market on the main floor.

3. Corridor Specific Plans

| Retail Category | Market Potential |
|--|------------------|
| Motor Vehicle & Parts Dealers | |
| Automobile Dealers | \$ 17,981,857 |
| Other Motor Vehicle Dealers | \$ 587,386 |
| Auto Parts, Accessories & Tire Stores | \$ 833,895 |
| Furniture & Home Furnishings Stores | |
| Furniture Stores | \$ - |
| Home Furnishings Stores | \$ 435,809 |
| Electronics & Appliance Stores | |
| | \$ 2,290,481 |
| Bldg Materials, Garden Equip. & Supply Stores | |
| Bldg Material & Supplies Dealers | \$ 354,455 |
| Lawn & Garden Equip & Supply Stores | \$ 454,345 |
| Food & Beverage Stores | |
| Grocery Stores | \$ 1,033,356 |
| Specialty Food Stores | \$ - |
| Beer, Wine & Liquor Stores | \$ 256,701 |
| Health & Personal Care Stores | |
| | \$ - |
| Gasoline Stations | |
| | \$ 9,815,179 |
| Clothing & Clothing Accessories Stores | |
| Clothing Stores | \$ 546,402 |
| Shoe Stores | \$ 334,804 |
| Jewelry, Luggage & Leather Goods Stores | \$ 160,723 |
| Sporting Goods, Hobby, Book & Music Stores | |
| Sporting Goods/Hobby/Musical Instr Stores | \$ 778,364 |
| Book, Periodical & Music Stores | \$ 52,039 |
| General Merchandise Stores | |
| Department Stores Excluding Leased Depts. | \$ 3,360,124 |
| Other General Merchandise Stores | \$ 17,774,414 |
| Miscellaneous Store Retailers | |
| Florists | \$ - |
| Office Supplies, Stationery & Gift Stores | \$ 251,652 |
| Used Merchandise Stores | \$ 26,617 |
| Other Miscellaneous Store Retailers | \$ 378,586 |
| Food Services & Drinking Places | |
| Full-Service Restaurants | \$ - |
| Limited-Service Eating Places | \$ 23,362 |
| Special Food Services | \$ - |
| Drinking Places - Alcoholic Beverages | \$ - |

OC Haley Blvd. retail sales leakage in dollars: demand exceeding supply; Source: ESRI Business Analyst; Analysis by GCR Inc.

Does the corridor facilitate economic resilience?

Market Analysis

Oretha Castle Haley Boulevard is poised for continued growth. Centrally located within the city, the corridor is easily accessible. It is served by multiple transit lines and is in proximity to several others. Several neighborhoods and major destinations are also within walking distance. The corridor's location adjacent to the Central Business District is attractive for businesses and visitors; however, pedestrians may be discouraged from traveling between the corridor and the CBD because of the need to walk underneath the Pontchartrain Expressway, a vacant, unattractive space sometimes occupied by a homeless encampment. While bike facilities nearby are limited, a new bike lane is planned to be installed on O.C. Haley Boulevard in the near future. Automobile access is also excellent; the corridor is easily reached from US 90. Public parking is limited, encouraging greater pedestrian activity but also driving concerns that a parking shortage is becoming a problem as development increases.

The O.C. Haley Boulevard corridor is home to several organizations which serve both the neighborhood and the city at large. Some of these organizations, such as Good Work Network, Ashe Cultural Arts Center, Café Reconcile, and the YMCA, have been on the corridor for years. These organizations strengthen the corridor's relationship with the surrounding neighborhoods, creating a balance between its growing status as a destination and its historic use as a neighborhood commercial center. An in-depth market analysis for the corridor is provided in the Appendix.

Crime

While the corridor has seen an overall decrease in total calls to NOPD, there has been a substantial increase in calls related to the violent and property crime categories (25.6 percent and 15.5 percent respectively). Traffic, vice and all others decreased substantially.

Demographic / Socioeconomic Profile

Low incomes and increasing housing costs present challenges. The corridor's population has increased at roughly the same rate as the rest of the city. Median income is 40 percent lower than the city as a whole, with 47 percent of households in the area earning less than \$20,000 annually. Housing costs are generally lower near the corridor than the city as whole, but because of significantly lower household incomes, rent is a higher proportion of income than in the rest of the city (35 percent). This problem may be expected to worsen, as the sale price per square foot of residential homes has risen significantly in recent years (22 percent, 2009-2014).

Main Street Resilience Plan

Physical Attributes & Stress

Infrastructure is not well suited to economic prosperity but opportunities for improvement exist. Sidewalks and roadways are generally in fair or worse condition, and bike facilities are minimal. Improvements to pedestrian facilities are needed, as there is a high rate of pedestrian crashes on the corridor (6.63 per mile annually). While several bike facilities are planned to intersect with the corridor, none have been constructed to date. There is a walking path on the Martin Luther King, Jr. Boulevard neutral ground that intersects with the corridor; while this path provides some aesthetic, cultural and recreational value, it has a minor contribution to overall pedestrian accessibility. Streetscaping is similarly sparse, with minimally maintained planting strips present on about 39 percent of the corridor. Aside from public facilities, the individual sites and structures on the corridor may present some challenges to economic vitality. A substantial portion of corridor structures appear to be unoccupied (30 percent), and as discussed previously, 20 percent of structures are in below average or worse condition. Additionally, 47 percent of structures exhibited some type of barrier to access for people with disabilities.

These physical characteristics are expected to change dramatically, however, with an upcoming streetscape project planned for late 2016. This \$1.8 million project will include widened neutral grounds, repaired sidewalks with ADA accessibility, street repaving, installation of bike lanes on each side of the road, the removal of one vehicle lane on each side of the road, landscaping, and new crosswalks. The streetscape project is expected to significantly improve pedestrian & bicycle safety, as well as increase the corridor's visual appeal. Such improvements are considered to have a positive impact on access to a corridor, and may improve its overall accessibility and attractiveness as a place to live and invest.

As buildings are redeveloped and reoccupied, limited parking has emerged as a critical issue, particularly for events.



Street conditions, sidewalks and landscaping will be greatly improved by a streetscape project expected to begin in late 2016. The project will include a lane reduction and add bike lanes and pedestrian crossings.

3. Corridor Specific Plans



Historic storefront. Buildings range from 2 to 4 stories in height.

Corridor has opportunities for further infill development. Oretha Castle Haley Boulevard continues to draw attention from investors, businesses and new residents. This potential growth can lead to enhanced economic opportunity and stability, and there are opportunities for further development along the corridor. Many structures on the corridor are well below the building heights allowed by the city's Comprehensive Zoning Ordinance. Heights of up to 85 feet are allowed between the Pontchartrain Expressway and Felicity Street, and from Felicity Street to Jackson Avenue, heights of up to 40 feet are allowed. Future development on the corridor could take advantage of these additional heights, allowing for more residential and commercial square footage. Increasing the supply of housing and commercial space could relieve current strains on the market and help control rising prices. At the same time, however, the community's vision for itself must be carefully considered. At community workshops, participants emphasized a need to maintain affordability as critical to all future commercial and residential development. Further infill development may also exacerbate parking concerns voiced by existing businesses and residents in workshops.

Are Adequate Social Networks In Place?

Organizations on the corridor have aided its resurgence, but continued development may contribute to economic stresses. The Oretha Castle Haley Merchants & Business Association (OCHMBA) has a longstanding presence; they are well-organized and have facilitated renewed interest in the corridor from businesses and developers. A large number of non-profit establishments has also contributed to the corridor's strong social and support networks. However, rising property costs may make it more difficult for these organizations to remain on the corridor. The continued development of the corridor may also represent a stress that has a negative impact on resilience.

Summary

The recent, rapid changes on Oretha Castle Haley Boulevard have had a tremendously positive effect on economic development. New businesses and organizations have brought new visitors to the corridor. The surrounding neighborhood is experiencing a similar revitalization and increased numbers of residences. Negative consequences, however, are becoming apparent as investment and development pressures are increasing prices and threatening affordability. The supply of both leasable commercial space and housing is becoming limited, and gaps in essential services weaken the corridor's relationship with the surrounding community.

Main Street Resilience Plan

Recommendations

1. Address emerging parking demands with short- and long- term approaches.

Parking has emerged as a critical short term need to address the accelerating success of commercial revitalization on the corridor. Several private surface lots are available, typically for the specific business, but at times are informally shared. The corridor already has a mix of uses, spreading parking needs out throughout the day and week.



A number of surface parking lots are readily available for a shared system, but too many lots can create uninviting gaps in a corridor.

- A. Short Term: Formal Shared Parking System.** The recently adopted zoning ordinance Section 22.15 lays out a process for collective and alternate parking. In partnership with the OCHMBA, willing participants can develop an inventory of available spaces and an approach that could be a template for other corridors.
- B. Long Term: Identify and develop off-street parking structure.** As the area continues to develop, particularly between O.C. Haley Boulevard and St. Charles Avenue, there will be a need for additional parking. Continuing to build more surface parking in substantial quantities has an undesirable effect of taking land away from residential and commercial use and diminishing active street life and patronage. A parking garage could be developed as a public-only facility or as a public-private partnership.

2. Consider relocation of nearby neighborhood businesses.

As O.C. Haley Boulevard evolves from its previous underutilized condition, it should be the clear choice for long-time neighborhood businesses to cluster and grow together. For example, the Roux Carré market provides spaces for neighborhood entrepreneurs to grow their food service businesses. If other businesses with loyal neighborhood customer bases were to relocate and grow on O.C. Haley Boulevard, the corridor's connections to neighborhood residents would grow, integrating the rapidly changing corridor with existing residents and moving businesses into renovated buildings. Issues of available sites and program champions would need to be identified. NOLABA could be a lead partner, with support from the OCHMBA and a non-profit service provider, such as Good Work Network.

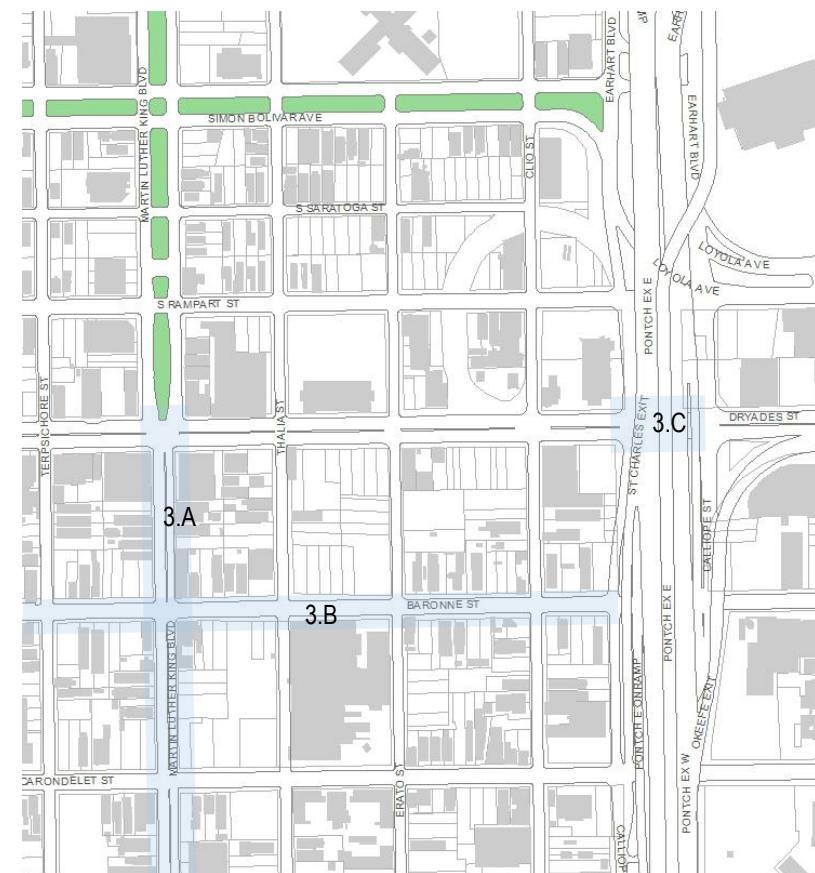


Private redevelopment of a parking lot in the CBD will result in a mixed-use building with 400 public parking spaces. A public-private partnership could provide a long term solution for parking needs that also allows for positive infill.

3. Corridor Specific Plans



Existing conditions of Martin Luther King, Jr Blvd. Sidewalks are narrow while the road is wide – both are in poor condition



3. Strengthen access to the corridor from the surrounding neighborhood.

Oretha Castle Haley Boulevard should not develop in isolation from the community; planned and potential projects can increase access for visitors and residents traveling by car, by bike, or on foot.

- A. **Redevelop Martin Luther King, Jr. Boulevard (MLK)/Melpomene Street to prioritize walking and biking.** MLK Boulevard/Melpomene Street connects the corridor from Magazine Street to Claiborne Avenue. The section from Magazine Street to O.C. Haley Boulevard can be redesigned for improved pedestrian, bicycle, and transit access, including enhanced ties with the St. Charles Avenue Streetcar line. Recent zoning changes allow for a diverse mix of uses along MLK Boulevard. Wider sidewalks and protected bicycle lanes along MLK Boulevard would provide safer access to O.C. Haley Boulevard from the busy Magazine Street and St. Charles Avenue corridors, drawing more users to the corridor while slowing vehicles.
- B. **Extend the Baronne Street bike lane across US-90.** The current bicycle lane on Baronne Street terminates at US 90. If this were extended across the highway, bicycle connections into the O.C. Haley Boulevard corridor would be strengthened. Traveling to the corridor by bicycle from the CBD would be made safer and quicker with this protected lane in place.
- C. **Develop a gateway project to better connect Downtown and O.C. Haley Boulevard.** The Pontchartrain Expressway overpass presents a psychological and physical barrier to drawing residents, workers and visitors to O.C. Haley Boulevard, despite its close proximity to downtown. There are many applicable case studies where beautification and enhancements have transformed barriers, like highways or rail yards, into destinations in their own right.



The Baronne St. bike lane terminates in the CBD. Extending this path would strengthen connections to the corridor.



The Underpass Park in Toronto transforms this space into an inviting place. A similar treatment could improve connections between O.C. Haley Blvd. and the CBD/Warehouse District.

Main Street Resilience Plan

Broad Street

1.35 Miles
44 Block Faces
355 Businesses
8,142 Residents (1/4 Mile)



Description

Broad Street is one of the most highly traveled corridors in the city, serving several neighborhoods and major destinations. The neighborhoods surrounding Broad Street are culturally and economically diverse. Despite the corridor's status as a major thoroughfare, many of its businesses are small, neighborhood-oriented establishments. The portion of Broad Street examined in this plan stretches from Tulane Avenue to Bayou Road, a relatively long segment that does not have a single, coherent character or connectedness; rather, it is a collection of smaller segments, each with its own set of designs and use types.

Long-standing economic stresses have severely impacted the commercial viability of the corridor, and its vulnerabilities has been strongly linked to the surrounding neighborhoods and other nearby corridors. Tulane Avenue, for example, was once a primary route for inter-city travel and a thriving commercial corridor; its decline, precipitated by the construction of the interstate, has also affected nearby sections of Broad Street. Disinvestment in adjacent neighborhoods, such as Treme and the Seventh Ward, resulted in declining activity on the corridor. Despite this decline in activity, Broad Street has remained one of the city's major routes and has always had active commercial uses.



Current Land Uses on Broad St.; Source: Building Survey, 2015

Assessment

Key Findings

• Priority Vulnerabilities:

- A significant portion of the corridor is located in the 100-year floodplain.
- Buildings are in poor condition.
- Businesses without preparedness plans are vulnerable to hazards.
- A widening gap between costs and income may force long-time residents to leave the area.
- Broad Street is comprised of distinct segments rather than a single, cohesive corridor, creating difficulties in reaching a consensus on corridor goals.

• Strengths:

- Residents and businesses have access to a high concentration of essential services in the vicinity.
- Increased attention and investment are strengthening commercial opportunities.
- Recent and proposed infrastructure improvements will have a dramatic effect on the character of the corridor.
- Redevelopment opportunities may strengthen the corridor's status as a destination.

How vulnerable are corridor facilities and users to shock events?

Building design and businesses' levels of preparedness increase vulnerability to shocks. The buildings on the corridor, as well as the businesses that occupy them, exhibited signs of increased risk to damage from shock events. A very high percentage of corridor buildings are built at grade (77 percent). More than half do not have protected windows and doors (51 percent), and a similar majority do not have elevated mechanical, electrical or plumbing systems (52 percent). Of equal concern is an apparent lack of emergency planning among businesses. Of the 21 corridor businesses that responded to the survey question, only three stated they have a complete, written emergency plan.

| | |
|---------------------------------------|-----|
| Foundation on grade | 77% |
| Unprotected windows or doors | 51% |
| In 'below average' or worse condition | 24% |
| HVAC not elevated | 52% |

Broad St. structural vulnerability indicators

Source: Field Survey, 2015



At-grade commercial buildings, typical in parts of the corridor, have increased flood risks.

There are significant flooding risks on Broad Street. A large portion of the corridor is in the Special Flood Hazard Area identified on FEMA's Preliminary Flood Insurance Rate Mate (FIRM), indicating a likelihood of flooding during a 100-year event, or 1 percent annual chance of flood. Model predicted flood depths for more frequent, 10-year flood events are also relatively high, approaching two feet in certain locations. This means those most vulnerable areas have a 96 percent chance of being affected by a 10-year flood event over the course of 30 years. Infrastructure deficiencies were also identified, including clogged drainage basins and missing catch basin covers.

The map on the following page shows the flood hazards, model predicted flood depths, and drainage deficiencies along the corridor.

Main Street Resilience Plan



Broad St. flood hazards and drainage infrastructure deficiencies

Sources: FEMA Preliminary FIRM, 2015; New Orleans Storm Water Management Model, 2015; Field Survey, 2015

Does the corridor facilitate economic resilience?

Market Analysis:

A strengthening commercial environment encourages businesses' resilience. Broad Street includes a dense and diverse collection of businesses. A significant portion—42 percent—of the more than 350 establishments on the corridor are personal services, miscellaneous retail, food and beverage, and health services businesses. The majority of businesses are independently owned, and many are small, convenience based establishments. These are interspersed with larger comparison shopping retailers that draw customers from a wide market area. Despite rising costs and a relative shortage of large, developable parcels, there are opportunities for further growth on the corridor. The customer base is enhanced by a large daytime population, especially near the Orleans Parish Criminal Justice complex, University Medical Center, and the future VA Medical Center. Broad Street is a centrally located, highly traveled corridor; the development of new destination businesses such as Whole Foods Market and The Broad, a four-screen movie theater, indicates that it is becoming increasingly attractive for investors. Economic strength and resiliency may be further enhanced by recapturing some of the dollars that are currently being spent in other locations. Nearly \$33 million in sales in the general merchandise category currently leak out of the Broad Street corridor. While the significant leakage in this category is a city-wide trend, Broad Street has a particularly strong opportunity to capitalize on the unmet demand for general merchandise due to its central location, high traffic volumes, and ease of access.

3. Corridor Specific Plans

Crime

| | |
|--|----------|
| Median Income | \$24,186 |
| Difference From City Median | -34.9% |
| Residential Price per Sq. Ft., 2014 | \$163 |
| Change in Price per Sq. Ft. 2009-2014 | 44% |
| Rent as a percentage of Household Income | 35.0% |

Income and Housing Costs within 0.25 mile of Broad St.
Sources: US Census American Community Survey, 2009-2013 & Multiple Listing Service, 2015



Automobile-oriented buildings and businesses dot some sections of Broad St..



Older sections of Broad St., with buildings oriented toward the street, are better suited for pedestrians.

Demographic / Socioeconomic Profile

Low incomes and rising costs may lead to instability and a changing customer base. Even though the cost of living has increased in recent years, household median income near the corridor is substantially lower than the city average. At \$24,186, it is nearly 35 percent lower than the citywide median of \$37,146, while housing costs near the corridor have risen considerably in recent years. Home values increased 44 percent between 2009 and 2014 to an average price of \$163 per square foot. Thirty-five percent of household income near Broad Street is spent on rent, as compared to the city average of less than 25 percent. Given the abundance of neighborhood-serving, convenience-based businesses on the corridor, the potential loss of existing customers due to rising rents is a critical threat to local small businesses. While rising property values may be welcome to investors and property owners, the displacement of existing residents may also destabilize the social fabric of the surrounding neighborhoods, changing its character and causing the long-held relationships within the community to deteriorate.

Physical Attributes & Stress

Broad Street is a diverse corridor featuring an array of design characteristics, business types and needs. Between Tulane Avenue and Bienville Avenue, the corridor is more auto-oriented and businesses are often convenience-based. Many businesses draw customers from the nearby Orleans Parish Criminal Justice complex. It is expected that businesses on this section of Broad Street will also benefit from an expanded customer base brought by University Medical Center and the future VA Medical Center. On the central section of Broad Street, roughly between Bienville Avenue and Orleans Avenue, there is a growing number of destinations attracting visitors from other parts of the city, including Whole Foods Market, the Lafitte Greenway, and The Broad, a recently-opened movie theater. Between Orleans Avenue and Bayou Road, Broad Street gradually transitions into a lower density, neighborhood-oriented environment that includes a greater proportion of residential uses. The diversity of the corridor lends itself to a wide array of commercial and residential uses, but it also means that strategies for improving resilience must be tailored to multiple contexts, as opposed to broad, corridor-wide approaches.

Main Street Resilience Plan

Broad Street is a major thoroughfare for multiple modes of transportation. Broad Street intersects both the Canal Streetcar and Lafitte Greenway, and several of the city's major transit routes travel on or near the corridor. In adjacent neighborhoods, both the street network and land uses are dense and pedestrian-oriented; however, Broad Street's roadway is designed to accommodate high volumes of car traffic. Pedestrians, cyclists and transit riders crossing Broad Street to access businesses or neighborhoods on the other side are presented with limited opportunities for safe crossing. Pedestrian and bicycle crash rates are significantly higher on Broad Street than other corridors, with an average of 6.8 crashes involving cyclists or pedestrians per mile as compared to an average of 3.8 on the other corridors surveyed.

Recent and planned changes to the corridor may alter its perception as auto-oriented through functional and aesthetic changes. There are now bike lanes between Bienville Avenue and St. Bernard Avenue, and a potential future streetscape project will improve aesthetics, transit and pedestrian infrastructure between Tulane Avenue and Bayou Road. This project would introduce several new bus shelters and bike racks, as well as multiple sidewalk curb extensions along the corridor that will increase sidewalk space and reduce pedestrian crossing distances. Colored concrete paving and crosswalks would be installed at the intersections of Tulane Avenue, Canal Street and Esplanade Avenue; colored concrete crosswalks would also be installed at the intersections of Banks Street, Bienville Avenue, St. Louis Street, Orleans Avenue, Dumaine Street and Ursulines Avenue. The recently completed Lafitte Greenway, a transformative mixed-use path and linear greenspace connecting the French Quarter to Mid-City, intersects Broad Street between St. Louis Street and Toulouse Street. Notably, there are large sections of city-owned property adjacent to the Greenway at its intersection with Broad Street. While plans for these properties have not been finalized, they have been proposed as the location for a variety of public spaces and amenities.

| Road | ADT |
|------------------------------|--------|
| Broad Street (US 90) | 40,776 |
| Airline Drive (US 61) | 34,455 |
| Claiborne Avenue | 34,333 |
| Veterans Boulevard | 34,080 |
| Gen. DeGaulle Drive (LA 428) | 28,782 |

Average Daily Traffic since 2010, Top 5 New Orleans roads (excluding freeways)

Source: Regional Planning Commission, 2015.

“Pedestrian and bicycle crash rates are significantly higher on Broad Street than other corridors.”



Maximum allowable building heights authorized under current zoning regulations and current corridor elevations
Source: City of New Orleans Comprehensive Zoning Ordinance, 2015; Building survey, 2015

3. Corridor Specific Plans



A building under renovation on Broad St. now houses a bicycle shop.

The corridor has seen increased attention and investment and further redevelopment is possible in the corridor. Broad Street enjoys a relatively low vacancy rate, but many buildings are in poor condition compared to other corridors. Both of these characteristics appear to be changing as investment increases in the corridor. In addition to the proposed streetscape improvements, developments such as The Broad movie theater and the St. Bernard Project residences indicate a shifting market preference toward Broad Street as a commercial and residential destination. With the exception of the Lafitte Greenway, the entirety of the corridor is zoned Historic Urban Mixed Use, with a maximum building height of 40 feet. Many buildings on the corridor do not reach this limit; more intensive development could bring more housing and commercial supply to the area, as well as the redevelopment of underutilized or blighted properties. The current regulations are somewhat limited in their ability to allow transformative urban development. Allowing more intense development, including greater height limits and densities, at key locations may prove useful in creating catalytic change on Broad Street. Some sections of the corridor that are in proximity to more intense development, such as the new medical centers, residential developments, and criminal justice facilities on Tulane Avenue and Canal Street, may be conducive to increased heights or densities.

Are Adequate Social Networks in Place?

Despite a successful Main Street organization, Broad Street lacks an active and coordinated merchants or business community. One of the biggest challenges facing the continued prosperity and long term resilience of Broad Street is a relatively unengaged business community. The Main Street organization, Broad Community Connections (BCC), has made some progress in organizing corridor businesses and establishing relationships. However, the group has indicated that consistent, widespread engagement is still a challenge. The corridor's segmented character and uses may be one explanation for the business community's lack of cohesion. Some businesses are in contact with one another or are involved in the community-serving organizations, such as BCC and Zulu Social Aid & Pleasure Club, but Broad Street as a whole lacks a single forum for businesses to connect, share resources, and advocate as a group.

Summary

Broad Street has already attracted the interests of businesses and investors as its adjacent neighborhoods continue to experience physical and economic revitalization. The increased attention now being paid to the corridor may be leveraged to improved physical and economic resilience. The differences between the various segments of Broad Street may be further emphasized through infrastructure improvements and further private development, thereby creating distinct destinations along the corridor and taking advantage of existing market potential. Resilience to shock events can also be improved through individual structural improvements, business planning, and investments in utility infrastructure.

Main Street Resilience Plan

Recommendations

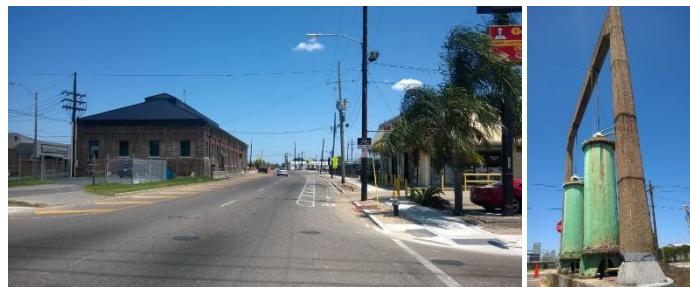
1. Develop distinct and separate sections of Broad Street through zoning, character and amenities

Broad Street is long and diverse, lacking a strong shared identity, and without a clear center or cohesiveness as a place. This contributes to its struggle to self-organize. Infrastructure improvements and buildings should contribute toward creating distinct subsections of Broad Street each with a focal point and gathering space. Magazine Street is a strong example of a long corridor with distinct sections. The section of Broad Street between Canal Street and Tulane Avenue is a good candidate for increased density, while gathering spaces can be created at the intersections with the Lafitte Greenway and at Bayou Road.

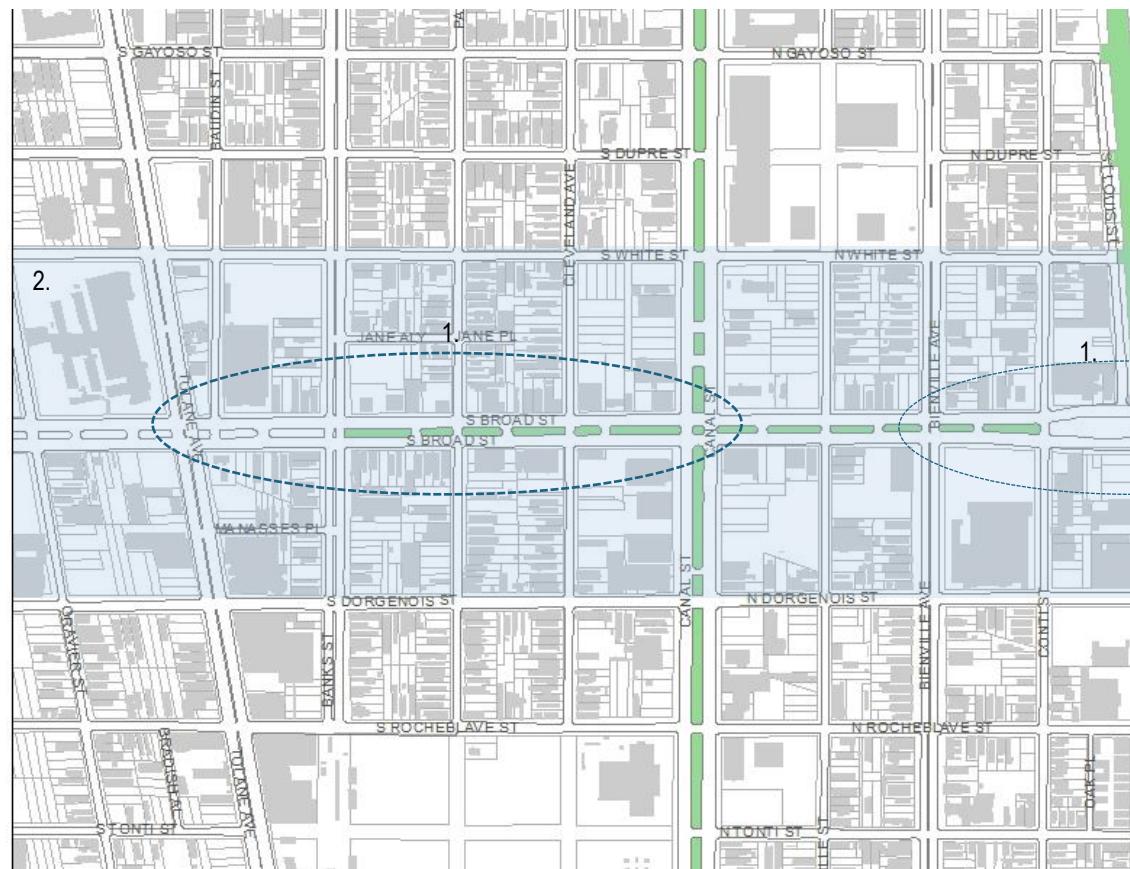
2. Expand infill options to support retail, transit and infrastructure.

Identify zoning or other regulatory changes that would encourage development that matches the desired character of individual subsections of Broad Street.

- Consider allowing more intense/dense development on Broad Street (currently all HU-MU) to allow development up to 5 stories (such as MU-1), including potential affordable housing bonuses or in-lieu-of fee to the City's Affordable Housing Trust Fund.
- Explore development minimums, as in the CBD, to prevent low-density uses.
- Develop, improve and maintain public gathering spaces to encourage neighborhood cohesion and identity.
- Prioritize pedestrians in streetscape projects by including sidewalk expansions, shade and shelter.



The pumping station at Broad St. and the Lafitte Greenway is a prominent landmark that could serve as an iconic focal point for public gathering, community space and water education.

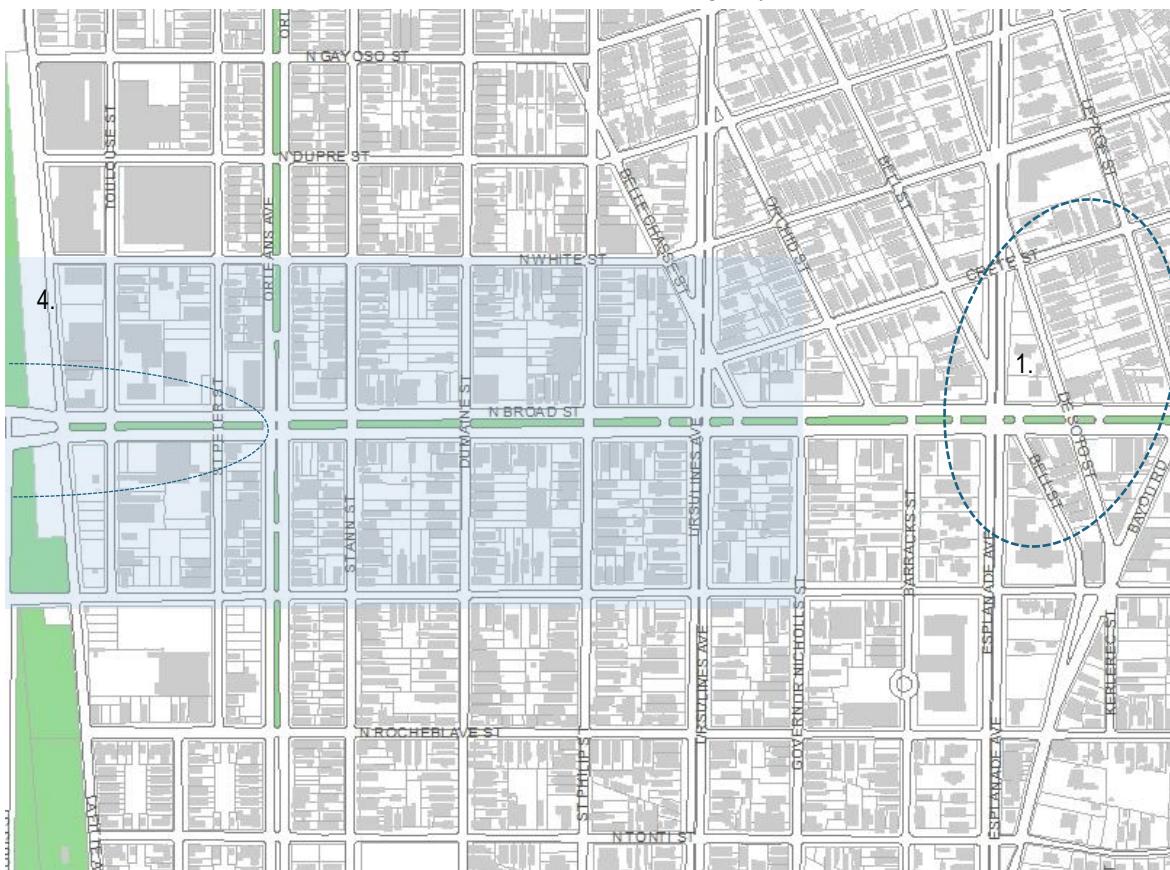


3. Pilot redundant power to support diverse essential services with wide connectivity

Broad Street has many essential services, including grocery stores, health care facilities and gas stations.

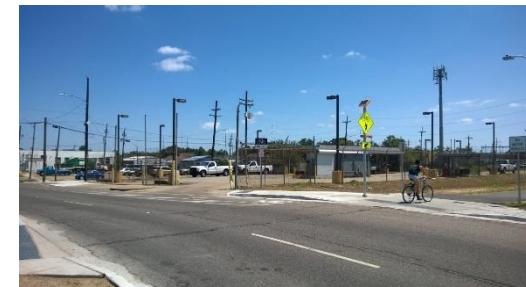
Additionally, it is a regionally-connected roadway that provides amenities and access beyond the adjacent neighborhoods. Under current conditions but with the addition of a redundant micro-grid, Broad Street would be able to provide immediate services in the event of widespread power loss.

Entergy and the City should apply for funds to pilot a micro-grid for redundant back-up power, while working with businesses that provide essential services, so they can adequately prepare inventory and staffing in times of emergency.



4. Redevelop city-owned sites at Lafitte Greenway as a community trailhead

The City currently uses key parcels for municipal services, including a sign shop and fleet fueling station. While the fueling station would require greater cost and site remediation, both lie at the intersection of a rapidly transforming corridor from industrial to mixed-use and recreational with the opening of the Lafitte Greenway. Relocating these facilities would support private market trends and provide a needed central gathering space on Broad Street. Limited concessions and other services supporting greenway recreation could generate funds for operating and maintaining a vibrant public heart. The Lafitte Greenway Master Plan calls for pavilions, market space and other amenities that could be more closely aligned with Broad Street if these city-owned spaces were available.



The City's fleet fueling station is located at the intersection of the Lafitte Greenway and Broad St..

Main Street Resilience Plan

Newton Street

.76 Mile

30 Block Faces

43 Businesses

3,244 Residents (1/4 Mile)



Description

Located on New Orleans' West Bank, Newton Street is at the confluence of contrasting neighborhoods. To the east are suburban-style, low-density residential neighborhoods; to the south is a primarily residential area with some scattered light industrial sites and a few large vacant sites, and to the north is the historic Algiers Point neighborhood. Newton Street has experienced relatively few shock events that have caused severe physical damage. It has, however, experienced severe economic stresses and lengthy periods of disinvestment. These have left the corridor with several undeveloped and underdeveloped properties. Much of the historic housing stock in the surrounding neighborhood is in need of maintenance or repair.



Newton St. showing the recently completed streetscape project with improved sidewalks and landscaping.

Key Findings

- Priority Vulnerabilities:

- A significant number of buildings are in need of floodproofing and hardening.
- Business continuity planning should be a priority, with particular attention given to outreach to business owners.
- There is a perception of a lack of safety, despite relatively low crime.

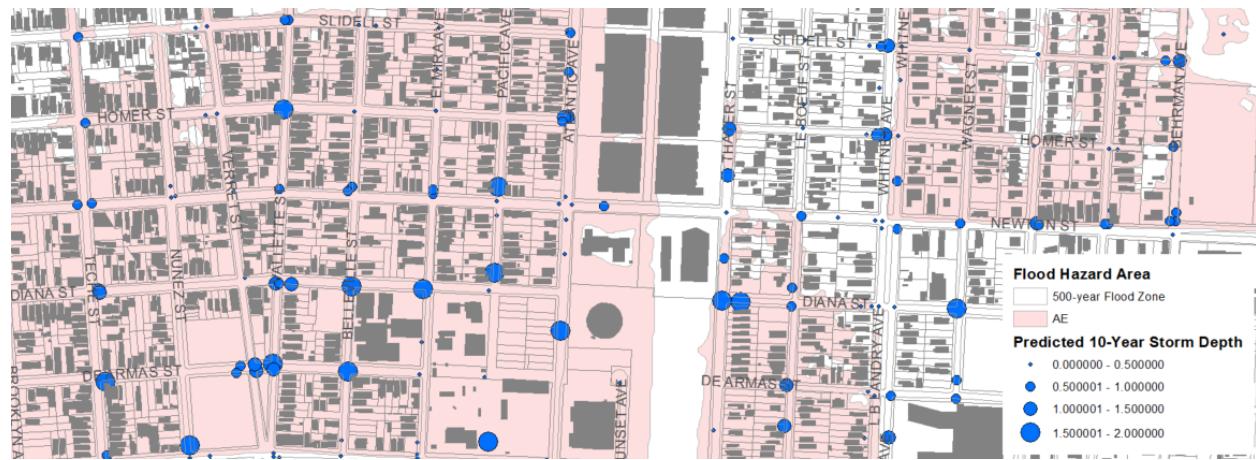
- Strengths:

- Newton Street has the potential for revitalization as a neighborhood-serving commercial corridor.
- Low population growth, relatively lower housing prices and higher vacancy rates contrast citywide trends and may present opportunities for growth & investment.
- Nearby major projects could impact the corridor in the future.

Assessment

How vulnerable are corridor facilities and users to shock events?

Little damage from previous shock events may increase the corridor's vulnerability. Though significant portions of the corridor and surrounding neighborhood are identified on Preliminary FIRMs as being within the 100-year flood zone, flood insurance claims have been relatively few. Community members themselves have also reported that damage from flooding and other shock events are not a major concern. Despite this reaction, vulnerabilities exist for businesses and people. Importantly, the lack of concern about potential damage from shock events may lead business operators to ignore planning for such possibilities. While a business may not always incur physical damage, severe events in adjacent areas can limit or prevent normal operations. In such instances, continuity plans can ensure businesses successfully withstand disruptions.



Newton St. flood hazards and drainage infrastructure deficiencies

Sources: FEMA Preliminary FIRM, 2015; New Orleans Storm Water Management Model, 2015

Main Street Resilience Plan

Buildings are in good condition, but key vulnerabilities exist. Of the buildings on Newton Street, 71 percent are built at-grade and 58 percent do not have elevated mechanical, electrical and plumbing systems. The lack of elevation presents a heightened vulnerability to flood events. There is also a significant proportion—69 percent—of buildings with windows and doors unprotected from wind or water. However, a relatively low number of buildings are in below average or worse condition, and very few are overburdening the drainage system with connected downspouts.

Newton St. structural vulnerability indicators

| | |
|---------------------------------------|-----|
| Foundation on grade | 71% |
| Unprotected windows or doors | 69% |
| In 'below average' or worse condition | 23% |
| HVAC not elevated | 58% |

Source: Building survey, 2015

Essential services are limited. Workers, customers and residents on Newton Street have limited access to basic needs, particularly healthcare and pharmacies. Such facilities are particularly important during shock events and in early recovery stages. While some small convenience and food stores are in the corridor, there is no easily-accessible full-service grocery store, thus limiting residents' access to affordable food options.

Does the corridor facilitate economic resilience?

The corridor serves the surrounding community. The businesses on Newton Street are primarily locally-owned small retail, personal and professional services with the corridor as a whole acting as a neighborhood-serving convenience center. Population density within ½ mile is more than double the city average, and the corridor is situated within a walkable street grid. There is also a modest daytime commuter population employed within ½ mile of Newton Street, whose potential spending on retail and services totals more than \$19 million. While most of this spending is likely to occur closer to the commuters' homes, it does represent a potential daytime market for goods and services on Newton Street. Despite this potential, the market analysis reveals that a majority of nearby residents' and commuters' spending on retail goods and services happens at locations other than Newton Street, with retail sales leakage in every business category. This suggests that the market could support more retail establishments on the corridor; however, relatively low amounts of sales leakage compared to other parts of the city mean that there are larger untapped markets available, potentially dissuading major retailers. Difficult auto access to major thoroughfares and small lot sizes further compound the difficulty of attracting large businesses. Newton Street, therefore, has the market potential to draw further investment from small, neighborhood-serving businesses who may take advantage of



This typical section of Newton St. is more residential, with scattered institutional and commercial uses.



This commercial end of Newton St., towards Behrman Ave., struggles with high vacancy and limited basic services.

3. Corridor Specific Plans

a fairly strong convenience-based market without significant competition from major retailers. Detailed market analysis results are found in the Appendix.

The lone major institution near the corridor is Federal City, a public-private mixed-use development on the site of the former Naval Support Activity property. Federal City currently houses the Marine Force Reserves Headquarters, Coast Guard Sector Command, a charter military school, a credit union, and other tenants. Planned future phases of Federal City may include a large housing component with commercial uses, and, if fully developed, may provide an increased customer base for businesses on Newton Street. Additionally, there is a movie studio proposed to be constructed south of Newton Street on currently vacant land. The project, approved by the New Orleans City Council in December 2015, would cost over \$60 million and would bring jobs, ancillary uses, potential residents and customers to the area.

Opportunities for residential growth must be balanced with the need for affordable housing options for low-income residents. Housing near Newton Street presents a challenge for long-term neighborhood residents. Currently, high vacancy rates and low sales prices may encourage increased investment from homeowners, spurring population growth. At the same time, low-income renters already pay a substantial portion of their earnings toward housing. Increased residential demand in the neighborhood could further increase rent prices and the housing cost burden for residents.

Slow population growth, relatively low property prices and high vacancy rates indicate an untapped supply of housing in the neighborhoods near Newton Street. The population surrounding Newton Street has grown at a significantly slower rate than the rest of the city, with an increase of about three percent compared to the citywide average of nearly ten percent. This slow growth may be correlated with the levels of vacancy in the neighborhoods surrounding Newton, as vacancy rates in the Whitney, Behrman and McDonough neighborhoods range from 25 to 30 percent. Additionally, property sales prices and the rate of price increases are substantially lower than the rest of the city. Home values are 41 percent lower than the city median. While sales prices rose 32 percent citywide between 2009 and 2014, they only rose 11 percent near Newton Street in the same period. Low sales prices and ample supply could attract prospective homebuyers and investors, especially if prices elsewhere in the city continue to trend upward. An influx of new residents would not only reduce housing vacancy rates but also introduce new customers to businesses on Newton Street.

In contrast to sales prices, median rents are comparable to the citywide median, which is particularly important given the low median household income in the community. The median rent of \$754 represents over 30 percent of median monthly household income. Compounding this issue is the low homeownership rate, with only 36 percent of nearby residents owning their homes, compared to the citywide rate of 47 percent. Renters, who make up the majority of the community, are spending a significant portion of their earnings on rent, despite high vacancy rates and low sales

“Low sales prices and ample supply could attract prospective homebuyers and investors, especially if prices elsewhere in the city continue to trend upward.”

Main Street Resilience Plan

prices. If investment in the area increases, it will be critical to ensure that existing residents do not experience increased housing costs.



Maximum allowable building heights on Newton St. and existing corridor elevations
Source: City of New Orleans Comprehensive Zoning Ordinance, 2015 & Field Survey, 2015

Blight, vacancy, and perceived safety threaten economic stability. Crime near the Newton corridor is relatively lower than the rest of the city and calls to NOPD have decreased substantially in recent years. At workshops held on the corridor, community members stated that many people perceive the area to be unsafe. Public gathering spaces are limited to the neutral ground of L.B. Landry Boulevard, parking lots and sidewalks, and use of these as gathering spaces is often construed as loitering. A high number of vacant buildings and a lack of attractive street features contribute to these perceptions. Thirty-one percent of buildings surveyed on Newton St. were found to be vacant or unoccupied, and despite recent streetscaping investments, 85 percent of the corridor lacks street vegetation. Though crime may be decreasing, the presence of loiterers, poorly maintained property and a relative lack of attractive street features deter potential customers and investors.

Change in NOPD Calls for Service
2012-2014



NOPD Calls for service near Newton St.; Source: City of New Orleans, 2015

Are There Adequate Social Networks In Place?

Newton Street needs groups and individuals to champion the needs of businesses and the corridor as a whole. While a number of strong social and civic organizations exist on and around Newton Street, including the Old Algiers Main Street Corporation, the Craige Cultural Center, and the Algiers Neighborhood Improvement Association, there is no corresponding merchants association. Business participation in the social and civic organizations is low and community members have cited difficulties in engaging the limited number of business owners in corridor-wide conversations and initiatives. This could change, as there is a desire to establish independent funding mechanisms for corridor improvements, allowing interested organizations to create change at a grassroots level.

Summary

Newton Street is a neighborhood-serving commercial corridor, but over time, it has experienced increased vacancy and the loss of businesses. There are opportunities to regain its status in the community, especially given its unique market potential for small, local establishments. New residents and customers may be drawn to the area by relatively low property prices, thereby increasing the local customer base. Improving public spaces would further enhance the perception of the corridor as a neighborhood destination, and there is a demand among stakeholders for funding mechanisms that could pay for these types of improvements.

Main Street Resilience Plan

Recommendations

1. Enhance local customer base with neighborhood infill and improved access.

A strong housing market is essential to a vibrant and prosperous commercial corridor. Existing market rate housing near the corridor is affordable to many households, as compared to Algiers Point and neighborhoods on the East Bank. However, demand is low and prices are dropping slightly. The Newton Street corridor has several potential sites for catalytic redevelopment that could spark additional interest from individual investors.

Potential catalytic projects & development sites:

- A. Arthur Monday Community Center (mostly vacant)
- B. Deep South Movie Studios
- C. New Orleans Redevelopment Authority (NORA) properties
- D. Vacant properties, light industrial sites

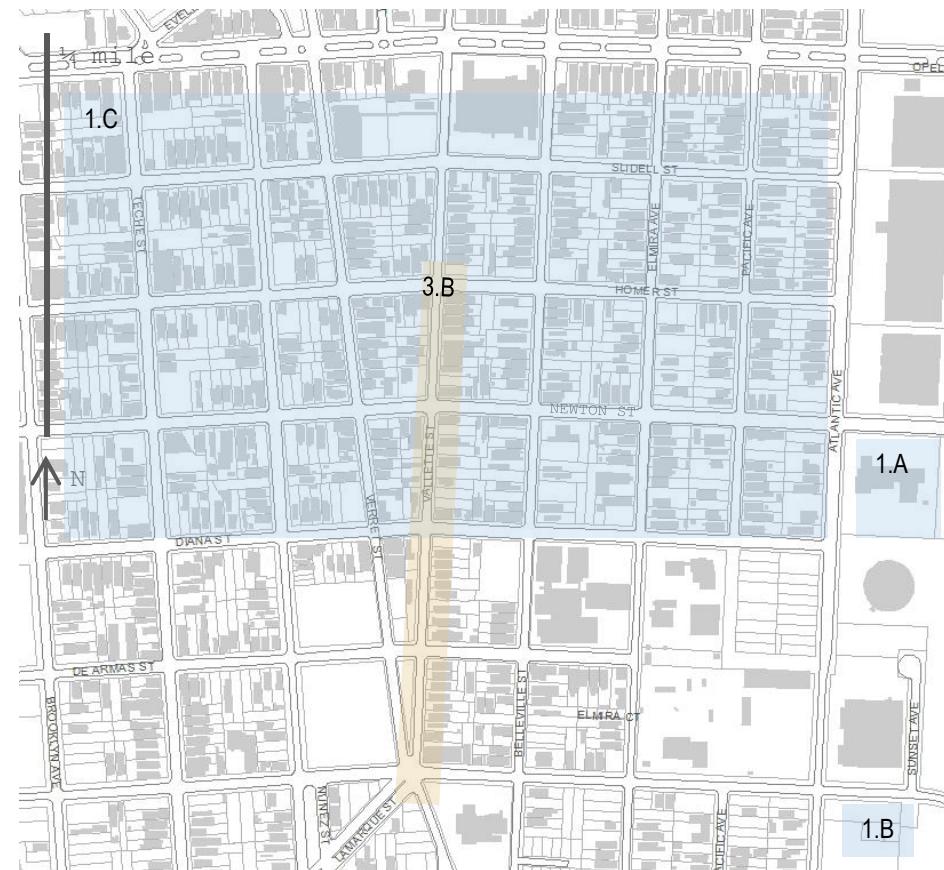
Coordinate with key stakeholders to champion redevelopment:

- Federal City: potential infill and extension of Newton St.
- Preservation Resource Center: targeted redevelopment of surrounding residential neighborhood using their Operation Comeback program
- NORA: redevelopment partner of properties

2. Increase Perception of Safety.

While there has been an uptick in violent crime, calls to 911 have generally been decreasing. One of the challenges for Newton Street is to address a perception of being unsafe, in part caused by people congregating in the neutral ground at L.B. Landry Avenue for socializing. Some actions to address the perception include:

- Define & enhance public gathering spaces,
- Enhance relationships and develop formal arrangements among residents and businesses, and
- Form a neighborhood watch or security district.



3. Corridor Specific Plans



Signage for Old Algiers marks the entrance to the neighborhood. Similar gateways are needed approaching Newton Street.



3. Improve access and approach.

Improved access to the corridor can be accomplished by strengthening multiple travel modes.

- A. **Improve transit connections.** Minor changes to bus routes, consolidating routes and improving frequency and connections between Newton Street and the Algiers Ferry, Federal City and the Wilty Terminal, the West Bank transit hub for Jefferson Parish, could bring visitors to Newton Street as well as increase the mobility of neighborhood residents.
- B. **Landscape gateways.** Modest streetscape enhancements to Whitney Avenue and Nunez Boulevard from Mardi Gras Boulevard, building off previous park and streetscape improvements, would define the Newton Street corridor for visitors and residents.

4. Reduce Vulnerability to Shocks.

Property and business owners can take steps to harden buildings and improve preparedness.

- The City and neighborhood associations can distribute building hardening and business continuity guides, offering connections to technical assistance providers who may be able to assist individual businesses with developing emergency preparedness plans.
- The City could enhance buy-in and business engagement with small loan or rebate programs to incentivize participation.

Main Street Resilience Plan

Alcee Fortier Boulevard

.25 Mile
4 Block Faces
56 Businesses
1,882 Residents (1/4 Mile)



Entrance to Alcee Fortier Blvd.

Description

Alcee Fortier Boulevard is distinct from the other Main Street corridors, both in location and character. It is generally surrounded by large tracts of undeveloped or industrial property, separating it from much of the rest of the city. Village de l'Est, the neighborhood in which the corridor is located, is, in large part, a self-contained community. A significant portion of the neighborhood's commercial land uses are concentrated on Alcee Fortier Boulevard. The corridor and surrounding area are significantly influenced by its large Vietnamese-American population with strong social ties and rich culture.

Both shocks and stresses have impacted the corridor in recent years. The area was significantly damaged following Hurricane Katrina, having experienced several feet of flooding. The neighborhood's relative isolation, while helping to preserve strong social networks, has also limited economic growth. Reduced employment opportunities and persistently low incomes have also resulted from relatively few economic opportunities. At the same time, the community has shown remarkable resilience. The recovery of Village de l'Est has been a model for other communities, as it has maintained a high level of social cohesion and self-reliance despite numerous setbacks.



Current Land Uses on Alcee Fortier Blvd.; Source: Building Survey, 2015

Key Findings

- Priority Vulnerabilities:
 - Improved access and amenities are critical for long-term stability
 - Incomes remain low despite a rapidly growing population
 - A high proportion of buildings are not elevated
- Strengths:
 - Infrastructure is relatively well-suited to handle shock events, and buildings are in generally good condition
 - Though distinctly commercial, the corridor must be considered in the context of its larger community
 - Strong social networks and community support contribute to resiliency

Assessment

How vulnerable are corridor facilities and users to shock events?

Risks must be assessed at the community level. More than any other corridor studied in this plan, Alcee Fortier Boulevard is highly dependent upon the surrounding community. While the corridor itself is largely outside of the 100-year floodplain, much of Village de l'Est has increased flood risks. Though a significant portion of the area's commercial activity is located on Alcee Fortier Boulevard, the corridor itself cannot function if the surrounding area is severely impacted by a shock event. On the other hand, the corridor may be well-suited to serve recovery efforts following such an event. Infrastructure is generally strong and Alcee Fortier Boulevard is home to a large number of community-serving businesses.



Sources: FEMA Preliminary FIRM, 2015; New Orleans Storm Water Management Model, 2015 & City of New Orleans, 2015

| | |
|---|-----|
| Foundation on grade | 81% |
| Unprotected windows or doors | 46% |
| In 'below average' or worse condition | 5% |
| Mechanical, Electrical or Plumbing systems not elevated | 50% |

Alcee Fortier Blvd. structural vulnerability indicators
Source: Building survey, 2015

Corridor buildings are in generally good condition, but few are protected against flood hazards. Only five percent of buildings on Alcee Fortier Boulevard were observed to be in below average condition, but a high proportion of buildings on the corridor (81 percent) are not elevated.

Main Street Resilience Plan

Does the corridor facilitate economic resilience?

Market Analysis

Both the strengths and weaknesses of the market near Alcee Fortier Boulevard are defined by its location. Located at the periphery of the city, the corridor's dearth of nearby competitors means that businesses may take advantage of the convenience-based market. While there is some leakage in many retail categories, the actual amount of spending taking place outside of the corridor in each of these categories is quite low. At the same time, the peripheral location of Alcee Fortier Boulevard limits opportunities to attract comparison shoppers from outside the immediate area. The unique culture of the community and its associated businesses, however, add to its attractiveness as a destination.

Demographics / Socioeconomic Profile

The population near Alcee Fortier Boulevard continues to recover rapidly, but incomes are very low.

Population growth in the area surrounding the corridor has been more than double the city average in recent years. At 22 percent, the rate of population increase reflects the neighborhoods continued strong recovery from Hurricane Katrina. However, incomes are nearly 40 percent below the city median, reflecting continued economic hardship in the community.

Physical Attributes & Stress

The corridor has recently been improved, and there are further opportunities for enhancing the physical environment. Streetscaping enhancements have added new landscaping and pedestrian amenities to Alcee Fortier Boulevard, providing aesthetic and functional improvements. The corridor and surrounding neighborhood are generally automobile-oriented, but the high density of businesses and substantial pedestrian activity present an opportunity to enhance the walking environment. Additional parking would allow visitors to park once and visit multiple businesses by foot. Reconfiguring parking may also open up additional public space within the right-of-way, creating further opportunities for streetscaping and pedestrian facilities. The community is also seeking funds to enhance pedestrian access across the Michoud Lagoon, and there is significant interest in improving pedestrian safety on the portions of Chef Menteur Highway near Alcee Fortier Boulevard.

Redevelopment of existing buildings and new infill could enhance economic opportunity. Though most buildings are in good condition, there are opportunities for aesthetic enhancements that would improve overall attractiveness and potentially invite further development. Landscaping outside of the recent streetscape improvements is limited, and large parking lots in front of buildings present a visual distraction and often gather litter. Many of the buildings, while structurally sound, have aging façades in need of cosmetic refurbishment or updating. Despite the concentration of businesses, community members have indicated that Alcee Fortier Boulevard requires significant improvement to be considered a valuable neighborhood asset. At a workshop on the corridor, local leaders

| | |
|--|----------|
| Median Income | \$22,596 |
| Population Change 2010-2015 (1/4 mi.) | 22% |
| Median Income | \$22,596 |
| Income Variance From City Median | -39% |

Alcee Fortier Blvd. Population Change & Income Sources: US Census, 2010; ESRI, 2015 & US Census American Community Survey, 2009-2013



Michoud Lagoon is adjacent to the corridor.

indicated that while businesses on Alcee Fortier Boulevard serve a functional purpose, the street itself is generally perceived by the community to be unattractive and unwelcoming.



Maximum allowable building heights, Minimum and maximum post-Katrina flood depths, and current corridor elevations

Sources: City of New Orleans Comprehensive Zoning Ordinance; Infrastructure Field Survey, 2015

Access is a major concern for the community. Alcee Fortier Boulevard is served by a single transit route, which is the only means for transit-dependent populations to access other parts of the city. Non-motorized access is similarly limited, with no designated bicycle or pedestrian facilities on Chef Menteur Highway. While the area is adjacent to several major thoroughfares, its distance from other commercial and residential centers isolates the community from the rest of the city.

Are There Adequate Social Networks in Place?

The community is supported by strong social networks. Village de l'Est is home to some of the most active and effective civic organizations in the city. The Mary Queen of Vietnam Community Development Corporation (MQVN CDC), Vietnamese American Young Leaders Association of New Orleans (VAYLA), Village de l'Est Improvement Association, and Vietnamese Initiatives in Economic Training (VIET), among others, have all been critical to the area's continued recovery and community strength, including organizing businesses and advocating on their behalf.

Summary

Though the corridor is a cultural destination, its location limits the ability of businesses to draw customers from other parts of the city. As the neighborhood's primary concentration of businesses, however, it has the opportunity to transition from a merely functional commercial corridor to a beloved focal point of the neighborhood. Encouraging further development and enhancing aesthetics would improve the perception of Alcee Fortier Boulevard among community residents, drawing more customers to businesses. Improved access within the neighborhood and to the rest of the city could also increase the customer base and benefit the community's many low-income residents.

Main Street Resilience Plan

Recommendations

1. Explore adjusting zoning to allow for infill development and reduced setback requirements.

There are several examples of creative reuse and infill development in the immediate area that could be replicated in the corridor if new commercial space was required. Significant space for infill development exists along Alcee Fortier Boulevard that could further the commercial needs and create a more intimate environment for people. In the example shown in photos below, buildings appear contiguous, but they are actually a collection of buildings with a common façade on separately-owned parcels. Reduced setbacks could also improve the pedestrian experience.



Examples of creative adaptive reuse and infill along the corridor to meet community needs.

2. Relocate parking to the street and redevelop the public right-of-way for flexible public use.

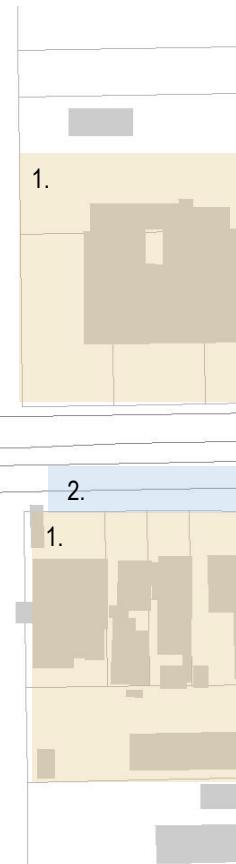
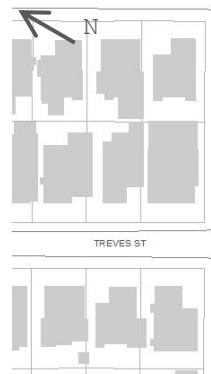
The City controls a strip of right-of-way that is currently used for off-street parking, dumpster storage and other various uses. This land could be reorganized to allow for a more attractive connection to adjacent businesses. By eliminating a travel lane in each direction of Alcee Fortier Boulevard, slower traffic would increase pedestrian safety while two lanes of parallel parking would provide vehicular access. The space could then be developed for green infrastructure or other flexible uses.



Existing number of travel lanes exceed traffic demand.
Converting one lane to parking would create about 12 parking spaces mitigating redesign of public space along the sidewalk



Example of parking lot with permeable grid, grass and trees



3. Corridor Specific Plans

3. Redesign the public right-of-way on Chef Menteur Highway as a landscaped buffer with green infrastructure.

Residents greatly desired a stronger connection between businesses on Alcee Fortier Boulevard and neighboring businesses along Chef Menteur Highway. A redesign of the large public right-of-way on the north side as a continuous landscaped sidewalk would connect the two areas. This sidewalk would buffer high-speed vehicular traffic while integrating stormwater mitigation measures. Examples of these types of sidewalks fronting two parcels already exist along this portion of Chef Menteur Highway. Based on these properties, no parking would be displaced, but further analysis may be needed to confirm.

Implementation: Similar to Veterans Memorial Boulevard in Metairie, a small fee for use of public right-of-way could be implemented. Over time, that fee has paid for many improvements along that corridor. Working with the Louisiana Department of Transportation and Development (LADOTD) will be critical, as Chef Menteur Highway is a state highway.



Existing conditions on Chef Menteur Hwy.

Looking east toward Alcee Fortier Blvd., the paved public right-of-way is indistinguishable from private lots and contributes to an unfriendly environment for pedestrians. The green dashed line shows the approximate extent of the publicly-owned right-of-way.



Looking west from Alcee Fortier Blvd. from the same location as above shows several parcels already have landscaped public right-of-ways, creating a visual and physical barrier that strengthens the connection to adjacent businesses. Further enhancements could turn these refuges into active pedestrian uses.

Main Street Resilience Plan

St. Bernard Avenue

.82 Mile

23 Block Faces

77 Businesses

5,323 Residents (1/4 Mile)



Description

The portion of St. Bernard Avenue evaluated in this plan is located in the historic Seventh Ward, between North Claiborne Avenue and Broad Street. The corridor and surrounding neighborhoods are culturally rich and home to diverse businesses and populations. Nearby neighborhoods, particularly the Seventh Ward and Tremé, have historically been home to a large portion of New Orleans' Creole population. The area is representative of the city's cultural milieu, and is unique among neighborhoods in the United States.

Damage from shock events has typically been minimal and localized with the exception of Hurricane Katrina. The storm and subsequent levee breaks caused several feet of flooding along the corridor and in the surrounding neighborhoods. Like much of the city, the population and physical fabric has slowly recovered and St. Bernard Avenue may be poised for a new era of growth.

In the decades prior to Katrina, long-term stresses contributed to social and economic upheavals that served to exacerbate the physical damage from the storm. During the twentieth century, the corridor suffered from severe disinvestment similar to other parts of the urban core, but the neighborhoods near St. Bernard Avenue were further impacted by the construction of Interstate 10 over Claiborne Avenue. The expressway is often seen as a physical and symbolic cause of the deterioration of these neighborhoods'



Current Land Uses on St. Bernard Ave.; Source: Building Survey, 2015

Key Findings

- Priority Vulnerabilities:
 - The threat of flooding is not widespread, but some nodes may be at higher risk.
 - Many corridor buildings require hardening and floodproofing.
 - Despite strong social networks and civic organizations, there is no group specifically dedicated to the commercial strength of the corridor.
- Strengths:
 - Underutilized public and private spaces exist on the corridor that present opportunities for unique uses.
 - The area has a rich history of cultural diversity that welcomes new groups and opportunities.

economies and social fabric, and its construction is frequently cited as a major turning point in the area's history.

Assessment

How vulnerable are corridor facilities and users to shock events?

Both infrastructure and buildings are vulnerable to localized flooding. The corridor is not in the 100-year flood zone, but there has been a high concentration of flood insurance claims near the corridor at certain locations. Localized street flooding can be a problem, especially near Broad Street and A.P. Tureaud Boulevard. More significantly, the nearby residences just a few blocks away are lower-lying and do experience greater flooding. A field survey also identified damaged and obstructed drain lines between A.P. Tureaud Boulevard and Claiborne Avenue, potentially exacerbating localized flooding.



Historic flood claims by block near St. Bernard Ave. and predicted 10-year flood depth.

Sources: City of New Orleans, 2015 & New Orleans Storm Water Management Model, 2015

While most buildings on the corridor were observed to be in average or better condition, there are significant opportunities for reducing vulnerability to shock events. Just under half have elevated foundations, and even fewer have elevated mechanical, electrical and plumbing systems. Over 60 percent of corridor buildings have unprotected windows or doors.

| | |
|---------------------------------------|-----|
| Foundation on grade | 52% |
| Unprotected windows or doors | 63% |
| In 'below average' or worse condition | 26% |
| HVAC systems not elevated | 60% |

St. Bernard Avenue structural vulnerability indicators

Source: Building Survey, 2015

Main Street Resilience Plan

Does the corridor facilitate economic resilience?

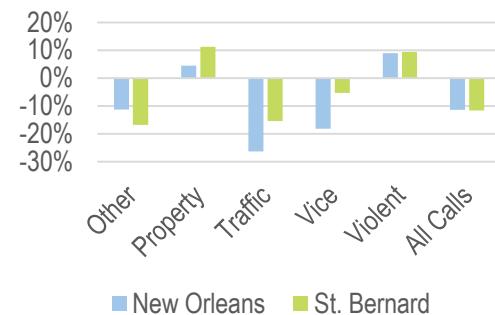
Crime

Crime and perceived lack of safety hinder neighborhood vitality. While total calls to NOPD have decreased in recent years, violent crime and property crime calls have increased. Importantly, community members at a public workshop identified a perceived lack of safety as a major concern. They specifically noted that safety concerns often deter them from walking on or near the corridor except when necessary.

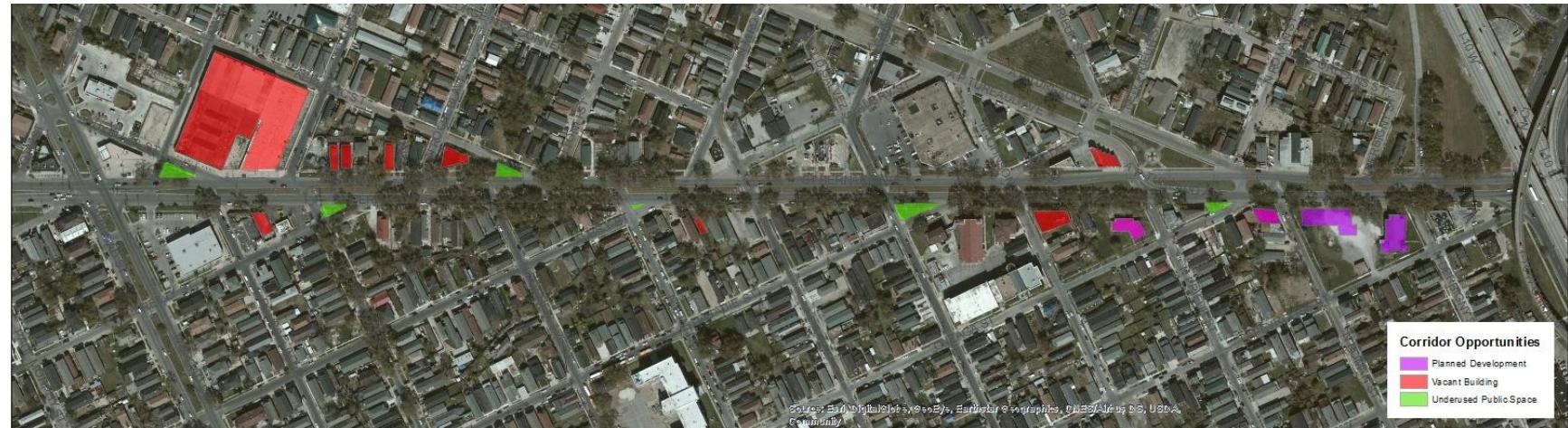
Demographics / Socioeconomic Profile

The neighborhood is growing, but incomes are low, and housing costs are increasing. The population within 1/4 mile of St. Bernard Avenue has grown at approximately the same pace as the city as a whole, increasing 11 percent between 2010 and 2015, as compared to a 10 percent increase citywide. Household income remains significantly lower than other parts of the city, though. At \$22,399, median income is 40 percent lower than the city median of \$37,146. While housing costs have remained relatively low, they are increasing rapidly. Housing cost burdens are growing, owing to a 40 percent increase in prices per square foot between 2009 and 2014, combined with low median incomes. On average, rent constitutes 34 percent of median household income near St. Bernard Avenue.

Change in NOPD Calls for Service 2012-2014



911 calls for NOPD service between 2012 and 2014;
Source: City of New Orleans, 2015



Vacant buildings, planned developments and underused public space on St. Bernard Ave.; Source: Field Survey, 2015

3. Corridor Specific Plans



The streetscape features an extensive tree canopy and bicycle lanes.

Physical Attributes and Stress

St. Bernard Avenue is centrally located, easily accessible, attractive, and offers opportunities for further physical improvement. The corridor is near many of the city's rapidly growing neighborhoods, including the Seventh Ward, Mid-City, and Tremé. It is also relatively well served by public transit and includes a bike lane. The corridor's canopy of live oak trees is also one of the most complete in the city, creating an attractive travel route and potential destination. There are several intersections on St. Bernard Avenue at which the angular street grid has created unique open spaces. Some of these are used for grass-covered green space or bus stops, while others are fully paved as part of the street. In nearly all cases, these locations present opportunities for enhancement. They may be transformed into public gathering spaces, landscaped areas, or green stormwater management infrastructure.



St. Bernard Ave. maximum allowable building heights, post-Katrina flood depths, predicted 10-year storm depth (T10), and current corridor elevations
Sources: City of New Orleans Comprehensive Zoning Ordinance; New Orleans DPW Hydraulic Model, 2015; Infrastructure Field Survey, 2015



The Autocrat Club is an anchoring community organization.

Are There Adequate Social Networks in Place?

Many organizations serve the community, but businesses need their own champion. The Seventh Ward is a tightly knit community with rich historical and cultural ties among its members. It is home to several strong civic organizations, churches, school groups, and social clubs dedicated to serving neighborhood residents. Corpus Christi – Epiphany Catholic Church, the Seventh Ward Neighborhood Association, and the Autocrat Club, among others, organize residents and provide services. At the same time, the community prides itself on its openness and a welcoming attitude towards new groups and residents. There is no group, however, specifically focused on strengthening St. Bernard Avenue as a commercial corridor or Main Street. At corridor workshops, participants suggested the establishment of a merchants' association would help organize businesses and support further development on the corridor.

maximum height,
N. Dorgenois to
N. Broad: 60'

maximum height,
N. Claiborne to
N. Dorgenois: 40'

3' ABFE
post-Katrina: 2'-0"
T10: 1'-6"
sidewalk: -1'-6"
curb bottom: -2'-0"

Main Street Resilience Plan

Recommendations

1. Redesign excess pavement in street to aid in storm water management.

One of the corridor's unique design features is the merging of the surrounding street grids to form triangular shapes. Many of these triangular parcels have been paved, increasing stormwater runoff to more vulnerable parts of the community. Areas shown in green on the map are possible candidates for green infrastructure adaptations, some examples of which are shown below.



Example of bio-infiltration and crosswalk



Example of parking lot with permeable grid, grass and trees



Example of bio-infiltration and crosswalk

2. Develop Main Street or Merchants' Association.

A consistent factor for revitalization, attracting customers and long term resilience is the presence of an organization of corridor businesses.

While St. Bernard Avenue has several existing neighborhood associations, the corridor lacks a clear champion. A new organization, a component of an existing one, or a partnership effort is critical to developing coordinated action and identify.



3. Corridor Specific Plans

3. Minor infrastructure improvements

- A. Improve sidewalks along the most concentrated business section, N. Miro Street to N. Claiborne Avenue, to improve walkability and accessibility. This section of St. Bernard Avenue also features one of the city's iconic live oak canopies, providing shade for walking between businesses.
- B. Minor drainage improvements to repair collapsed catch basins will help small localized flooding near N. Claiborne Avenue.



Sidewalk in need of repair



Storm drain in need of repair



4. Create a space for a retail/cultural pop-up market and gathering

One potential driver of retail and commercial activity is a space for small, temporary vendors. These spaces create opportunities with low barriers to entry for entrepreneurs to transition their hobby to a business. The multi-ethnic, inclusive history of the area is a great potential source of inspiration and energy. The space, ideally, would attract vendors of many different contemporary cultures represented in the surrounding neighborhood.

An ideal public site for this market is the intersection of St. Bernard Avenue and A.P. Tureaud Avenue – an area where community members expressed a desire for a strengthened commercial district. There are also other nearby vacant private properties, which have potential as temporary or long-term alternatives. Pop-up markets can be an effective revitalization tool for underutilized property.



The French Market has opportunities for many vendors and a history of spin-offs to full retail stores, yet its strong tourist presence limits its appeal to local shoppers.



The African Marketplace and others at the Jazz & Heritage Festival are another example of a local marketplace, but limited to few days a year.

Main Street Resilience Plan

St. Claude Avenue

.58 Mile
18 Block Faces
139 Businesses
4,608 Residents (1/4 Mile)



Description

Located at the confluence of several distinct and culturally rich neighborhoods, St. Claude Avenue is a major corridor that serves the community and is rapidly transforming into a destination. The portion of St. Claude Avenue studied in this plan, between Elysian Fields Avenue and Press Street, is near the neighborhoods of St. Roch, the Seventh Ward, the Marigny, and Bywater. Each of these areas have long histories and are home to diverse populations. In recent years, these neighborhoods have experienced significant revitalization, increased investment and an influx of new populations.

Despite their historic and cultural status, the neighborhoods near St. Claude Avenue suffered from severe disinvestment in the 20th century. Many residents left the area and relocated to growing suburbs. However, the renewed interest on the city's historic neighborhoods as part of the post-Katrina recovery has benefited this corridor. In particular, the Marigny has become a popular destination for visitors and residents, and St. Claude Avenue serves as the primary corridor linking these newly-popularized neighborhoods with the French Quarter and CBD.



Current Land Uses on St. Claude Ave.; Source: Building Survey, 2015

Key Findings

- Priority Vulnerabilities:
 - The street itself acts as a barrier to stormwater drainage, exacerbating flood risk on the river side.
 - Corridor buildings may be vulnerable to damage.
 - Dramatic increases in housing prices threaten economic development and community vitality.
 - Street design is not pedestrian friendly or conducive to social gathering.
 - The population is growing at a substantially slower rate than the rest of the city.
- Strengths:
 - The corridor's surrounding neighborhoods are experiencing increased investment.
 - There is significant community interest in improving the physical and economic conditions of the corridor.
 - Unused or underused properties on and near the corridor present opportunities to continue revitalization.

Assessment

How vulnerable are corridor facilities and users to shock events?

Physical characteristics of the street and drainage infrastructure enhance flood risk. In the corridor, stormwater generally drains northward, starting at the river and heading towards St. Claude Avenue. However, the roadway elevation of St. Claude Avenue is higher than the gutters and drains on either side. Thus, the street itself acts as a barrier, increasing flood risks to properties on the south side, or river side, of the street. The risks are clearly illustrated by the Preliminary FIRM: properties south of St. Claude Avenue are in the Special Flood Hazard Areas, while those north of the street are outside of the 100-year floodplain. There are also several clogged catch basins and damaged drain structures along the corridor, potentially inhibiting drainage and heightening risk.



St. Claude Ave. flood hazards and drainage infrastructure deficiencies

Sources: FEMA Preliminary FIRM, 2015; New Orleans DPW Hydraulic Model, 2015; Infrastructure Field Survey, 2015

Main Street Resilience Plan

Building characteristics present vulnerabilities, but many businesses have taken efforts to prepare for hazard events. Of the buildings on the corridor, 69 percent are not elevated and 62 percent do not have elevated mechanical, electrical or plumbing systems. More than half do not have protected windows or doors. A relatively high number are in poor condition (23 percent). More encouragingly, many businesses indicated that they have created communications plans, have trained their employees in emergency plans, and have backup power systems.

Does the corridor facilitate economic resilience?

Market Analysis

The existing mix of businesses and the corridor location present opportunities for more diverse business types. St. Claude Avenue is highly accessible by car, transit, bike and walking, and is centrally located within the city. It is one of the city's primary thoroughfares, stretching from the Central Business District into St. Bernard Parish. Multiple bus lines cross or traverse the corridor and a new streetcar line from Canal Street will terminate at the intersection of Elysian Fields Avenue and St. Claude Avenue. The historic street grid is dense and walkable, and there is a bike lane on the street. St. Claude Avenue is home to a high proportion of food and beverage establishments, some of which are destinations for visitors from outside the immediate area. There is also a significant number of miscellaneous retail, personal services, and health services establishments. The potential convenience market on St. Claude Avenue is strong: within a half-mile of the corridor, both the population density and income density are approximately three times the city average. However, the corridor could support more businesses; the market analysis, included in the Appendix, indicates that area residents consume retail goods and services outside of the corridor in nearly all retail categories. There are also relatively few large, high-profile institutions, and none with large retail components. The KIPP Leadership Academy and Primary School is housed in the former Colton School building. The historic St. Roch Market was recently reopened, housing several small food vendors. In addition, the Healing Center offers leasable space to physical and mental health practitioners as well as a small grocery, restaurant and performance space. The combination of excellent accessibility, high retail leakage, and a lack of major institutions suggest that there may be opportunities for further business development on the corridor.

While there are several unused or underused spaces on the corridor, large-scale development may be difficult. Parcels on St. Claude Avenue are relatively small for a commercial corridor and have many individual property owners. Any major development on St. Claude Avenue would require significant property acquisition in addition to the redevelopment of existing buildings or parcels. Such investment is not only costly, but may also affect the character of the corridor by introducing new, large-scale structures amongst the existing historic buildings. At community workshops, some participants expressed concern over developments that may significantly alter the historic appearance of the corridor. While there are opportunities for new businesses on St. Claude Avenue,

| | |
|--|-----|
| Business Emergency Preparedness Plan | 40% |
| Business Communication Plans | 87% |
| Business Continuity Plans | 36% |
| Employee training on emergency plans | 69% |
| Flood Insurance | 86% |
| Rate of businesses with backup power systems (self-reported) | 36% |
| Foundation on grade | 69% |
| Unprotected windows or doors | 53% |
| In 'below average' or worse condition | 23% |
| HVAC systems not elevated | 62% |

St. Claude Ave. business preparedness and structural vulnerability indicators

Sources: Business Survey, 2015; Building Survey, 2015



Diverse building types on the corridor

3. Corridor Specific Plans

investment and development must be approached carefully and strategically. Investors seeking to take advantage of the corridor's market and location should consider context-appropriate infill developments.

Demographic / Socioeconomic Profile

Rapidly rising housing costs and persistently low incomes may be dampening population growth. While the neighborhoods near St. Claude Avenue have become some of the most popular and sought after in the city, population growth has slowed significantly. While the city's population as a whole grew by nearly 10 percent between 2010 and 2015, the population near St. Claude Avenue rose by less than six percent. This lack of growth may indicate that while other areas of the city were still regaining population following Hurricane Katrina, the areas near St. Claude Avenue had already repopulated by 2010. It is also possible that slower growth can be attributed to rapidly increasing housing costs, with sale prices increasing by 54 percent between 2009 and 2014. Combined with median incomes below the city average, the high housing costs may be limiting residential growth in the neighborhood and even causing some residents to be forced out.

| | |
|--|----------|
| Population Change, 2010-2015 (0.25 Mi.) | 5.5% |
| Median Income | \$36,162 |
| Difference From City Median | -2.6% |
| Residential Price per Sq. Ft., 2014 | \$264 |
| Change in Price per Sq. Ft. 2009-2014 | 54% |

St. Claude Ave. Population Change & Income
Sources: U.S. Census, 2010; ESRI, 2015; U.S. Census American Community Survey, 2009-2013

Physical Attributes & Stress

Despite highly walkable adjacent neighborhoods, St. Claude Avenue does not encourage pedestrian activity. The corridor is surrounded by dense, walkable neighborhoods, and is served by multiple transit lines. However, St. Claude Avenue does not enjoy significant pedestrian activity. Businesses and residents at corridor workshops attributed this to a harsh walking environment driven by a lack of shade and quality amenities.

Opportunities to increase infill development, improve drainage infrastructure and enhance the pedestrian environment may be combined in innovative ways. Because nearby neighborhoods are so popular and attractive to investors, new development through public-private partnerships could enhance the corridor's physical space. Private investment may be leveraged to develop and finance infrastructure improvements, including pedestrian spaces and green stormwater infrastructure. These types of improvements serve to encourage further development and stimulate the corridor's attractiveness as a destination, but may also fuel the high housing costs that are causing stress for long-time residents.



Main Street Resilience Plan

Recommendations

1. Re-design streetscape to prioritize foot traffic and spending time on the corridor.

One of the corridor's biggest challenges to sustained economic prosperity is lack of regular foot traffic. The current street design prioritizes vehicle travel including heavy trucks that often move at high speeds. This truck traffic further discourages pedestrian activity, reducing the desire to stroll and consider other destinations in the same trip. As a current state designated highway, close coordination with LADOTD is essential.



The existing streetscape prioritizes vehicles and does not encourage people to spend time walking.



This example of sidewalk extensions that are used by neighboring businesses for outdoor dining is found in the Lakeview neighborhood.

2. Explore value-capture to fund streetscape and infrastructure enhancements.

Rapidly rising real estate values and sales tax revenues are a potential source of financing the corridor's necessary improvements to streetscape and infrastructure. A geographically-constrained improvement district would generate revenues for direct use back into the corridor. The extent should continue beyond Press Street to Poland Avenue. Similarly, a tax increment finance (TIF) district could cross-subsidize new and growing commercial activity, including the planned Robert's Market, to further support improvement funding. This initiative would work in concert with Recommendation 4; both a green streetscape and, potentially, a share of the streetcar extension could be funded.



The Portland streetcar's initial phases were largely financed by a combination of an improvement district and a TIF.



3. Corridor Specific Plans

3. Integrate green infrastructure to street redesign.

Address localized flooding and runoff by maximizing stormwater absorption and retention where possible. The river side of the corridor experiences ponding and enhanced flood risk, which can be mitigated through green infrastructure. Community priorities indicated this work should complement a streetscape redesign.



Example of parking lot with permeable grid, grass and trees



Example of bio-infiltration and crosswalk

4. Encourage quality infill development.

Infill development would benefit the corridor by increasing the supply of both housing and commercial space. These types of developments can encourage walking and improve corridor infrastructure while remaining sensitive to the historic neighborhoods surrounding St. Claude Avenue. A limited housing supply is a major factor in rising costs and constrained population growth, further eroding a diverse, local and sustainable customer base.



Examples of new 3-4 story mixed-use infill development in other commercial corridors of the city.



Left: Faubourg Freret; Right: 1350 Magazine St. (credit Office of Jonathan Tate).

4. CROSS CORRIDOR ACTIONS

The following actions address issues and needs identified through the assessment process that affect all corridors and businesses.

Coordinated Small Business Support

Need: Small startup businesses seek affordable, move-in ready retail and office spaces in commercial districts and corridors. Most small businesses are not prepared for interruption. Small, aging and vacant properties found on main streets tend to be more affordable than rents in newly constructed buildings. However, these properties often need significant investments of time, expertise and capital to comply with code requirements (ADA, fire, kitchen, etc.). Small businesses can be connected to resources and mentors to develop continuity plans.

Resilience Strategies: Create a small business support program.

- 1) Provide “case workers” to entrepreneurs and property owners to help navigate the city permitting process. Work to improve coordination of permitting with other departments not currently included in the City’s One-Stop Shop. For example, include the Finance department for alcoholic beverage sales permits.
- 2) Develop services to provide business continuity support, including “office hours” and mentors. Based on the Business Continuity Workshops, attendees expressed the need for individual disaster planning guidance. One-on-one consultations with business owners would be effective. Personalized consultations would ensure a plan would be tailored to their business’ unique needs. Much of this programming could be integrated into existing small business technical assistance providers such as Urban League of New Orleans and Good Work Network.
- 3) Convene and coordinate the small business ecosystem, including commercial property owners, brokers, lenders, business owners/entrepreneurs, Main Street managers, the New Orleans Redevelopment Authority (NORA), and the New Orleans Business Alliance (NOLABA). This ecosystem can then facilitate transactions (“matchmaking”), for tasks ranging from simple leasing to property assemblage for larger scale development, as well as business mentoring and preparedness.
- 4) Incentivize owner and tenant rehabilitation of outdated structures through subsidized financing. Successful models include revolving low-interest bridge loan funds and the Fresh Food Retail Initiative.
- 5) Educate hold-out property owners on the true value of their property and expedite sales or leases.

Resilient Commercial Buildings Program

Need: Many buildings are vulnerable to weather events: 57 percent of studied buildings have utility equipment (condensers) on the ground floor and 58 percent have unprotected windows or doors. Aged buildings are in further need of shoring and strategies for quickly recovering from minor flooding. For new construction, building code requirements may prevent commercial buildings from installing the at-grade entrances that would encourage active and vibrant street life.



This example of new construction is a four story mixed-use infill development with an elevated ground floor.

Resilience Strategies: Create a resilient commercial buildings program.

1. Expand programs like façade improvement and renovation loans to include building hardening as required elements.
2. Review the building code to consider greater flexibility in meeting flood depth requirements through the use of flood protection methods that minimize impacts to street frontages, such as interior elevation.
3. Encourage more shade and shelter by reducing costs and regulatory barriers to balconies and overhangs.
4. Consider amending the floodplain management ordinance to require the owners of historic structures to show that they have considered alternative means of flood protection prior to requesting a variance.

Resiliency improvements for buildings should aim to protect major systems, such as HVAC, electrical, and plumbing, as well as elements that could be damaged from wind or debris, such as windows, doors, building appendages, and interior contents. Modifications include elevating exterior air conditioning condensing units above flood levels, installing protection for doors and windows, and securing or reinforcing exterior equipment, signage, and architectural elements like awnings and overhangs. Protecting the interior of a building includes two approaches to floodproofing: dry, which involves deploying temporary measures to keep water out of a structure, or wet, which uses water resistant materials and construction that can be easily cleaned and dried out if flooded. Specific strategies for these methods of building hardening will vary per the conditions of each property.

Holistic resiliency improvements should also maintain and improve the architectural and urban design character of the corridor and its surrounding neighborhood. Resilient building retrofits can be part of an historic preservation strategy, while new development or major renovations should consider balancing any elevation of structures with the site, streetscape, and nearby architecture.

Opportunities for adapting existing buildings through renovations and retrofits could be funded by grants or programs similar to NORA's Façade ReNEW, which reimburses property owners. Funding should allow owners flexibility to pursue a wide range of resiliency improvements.

Building hardening measures should also encourage the prosperity and success of businesses by improving accessibility, operations, and maintenance, as well as educating tenants and owners on resiliency and preparedness.

Corridor-Funded Improvements

Need: Financing resilience improvements on these corridors requires a creative mix of options. Responses gathered through this planning process demonstrated a willingness to support some additional costs if they are directly channeled to corridor and neighborhood improvements.

Resilience Strategy: With many competing needs for public funds, particularly for critical services, corridor improvement funding could come from non-traditional sources. Three options that may be particularly effective in New Orleans are described below.

- **Tax Increment Finance (TIF) Districts.** In Louisiana, the state constitution limits TIF districts to sales taxes, rather than property taxes. As a result, sales tax-based TIF districts are typically employed when a large retailer seeks public assistance for infrastructure improvements. TIF districts have been used in other areas, such Cincinnati's Over-the-Rhine neighborhood, as a revitalization tool. Without the presence of a large retailer, the geographic boundaries of a TIF would need to be expanded for the district to effectively fund improvements.
- **Improvement Districts.** Special assessment districts are used to generate funds for infrastructure, security and operations activities within the district. Assessments are typically in the form of a property tax or parcel fee. Improvement districts must be created individually by the state legislature to gain taxing authority; however, each individual district must be voted on separately, creating a cumbersome process. Once the districts are created by the legislature, assessments are enacted through a vote of district residents. Local examples include the Downtown Development District and French Quarter Management District. To expand the ease and effectiveness of this tool, the City and its partners could explore state legislation that would create general authorization and powers for the creation of corridor improvement districts at the local level.
- **Competitive City Fund.** Another concept that requires further study would be the creation of a competitive fund for corridor improvements. This fund potentially could be capitalized through a municipal bond issue. By making funds competitive, the City would encourage corridor stakeholders and businesses to organize and leverage private funding. Competitive public funds have become more popular at the federal level, as seen with HUD's recent National Disaster Resilience Competition. The City also created a competitive process to increase access to fresh foods through its Fresh Food Financing Initiative (FFFI). The FFFI was first-come, first-served, but only for qualified applicants, and was administered through third party financial institutions.

Public Gathering Space Initiative

Need: The development, improvement and maintenance of public gathering spaces connected to commercial corridors have direct impacts on resilience to both long term stresses and shock events. In addition to improving visual appeal, high quality public spaces draw potential customers to the corridor and encourage them to stay in the area longer. Dedicated space for socializing and entertainment can increase social networking opportunities—a strong need for many corridors—and may also reduce loitering, thereby increasing the perception of safety. In instances of shock events, public spaces serve a crucial role as the forum for individuals to reconnect and share resources. This function is especially important during and immediately after shock events when other gathering spaces such as businesses and institutions are likely closed.

Resilience Strategy: The City should consider implementing a formal initiative to develop public spaces that will reinforce the vibrancy of commercial corridors. Several public spaces have been identified in this plan and have been designed to support their respective Main Street corridors.

Stormwater Resilience Enhancements

Need: Flooding from storm events remains a major concern throughout the city and on several of the Main Street corridors.

Resilience Strategies: Small-scale improvements may be implemented to incrementally improve the overall condition and functioning of the city's stormwater infrastructure.

1. The impacts of storm events may be reduced by increasing the permeability of existing paving and other hard surfaces. To determine the potential effectiveness of increased permeability the city should perform detailed hydraulic modeling of each corridor and extended regions within drainage basins. These modeling exercises should include multiple permeable surfaces, or Low Impact Development controls, and determine their comparative effectiveness in flooding reduction.
2. Projects that may yield information about the drainage system (inspections, assessments, surveys, street rehabilitation, new construction, etc.) should be used as opportunities to update the hydraulic models with data about current conditions. Agencies responsible for maintaining or interacting with drainage facilities, such as the Department of Public Works and LADOTD, should update and coordinate their procedures to allow for inspection and documentation of infrastructure conditions whenever possible.
3. A public outreach program should be established to gauge the residential and business communities' interest in instituting permeability modifiers. Outreach should include an educational component to enhance community awareness of and support for innovative stormwater management techniques.